FARM FINANCIAL RECORD STUDIES 1928

ANNUAL FARM BUSINESS REPORTS PREPARED FROM RECORDS KEPT IN THE ILLINOIS FARM FINANCIAL RECORD BOOK FOR 33 AREAS FOR 1928

Prepared by the Department of Farm Organization
and Management of the University of Illinois

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

DuPage, McHenry, Cook and Kane County Farm Bureau

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Fifty-four Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June, 1929

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ANNUAL FARM BUSINESS REPORT

DuPage, McHenry, Cook and Kane Counties, Illinois, 1928

Prepared by R. R. Hudelson, G. B. Byers, and H. C. M. Case*

The 54 farmers in the above named counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6.5 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $323, there remains a rate of 5.5 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1,209. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $489 left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment, it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $133 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $224 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. A further allowance must be made in this case for the fact that practically all farmers included in this report are members of dairy herd improvement associations. This fact sets them still farther above the average in businesslike aggressive management. A field survey study of incomes on 100 farms in this area was made in December, 1928 with a view to determining the 1928 income on the average farm of the area. The results of that study indicated an average rate earned of only 1.5 percent. In this case all farms were included just as they came along the road without selection.

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* E. A. Carncross, E. M. Phillips, O. G. Barrett and H. P. Kelley, farm advisers in DuPage, McHenry, Cook and Kane Counties, respectively, cooperated in supervising and collecting the records used in this report.

Farm earnings vary widely from year to year, and 1928 was the best year for the accounting farms of this area since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,930 larger net incomes than the third which were least successful.

There was a difference of only 14 acres in average size of farm between the most profitable 18 farms and the least profitable 18 farms. Of this difference only 2 acres was tillable land and the other 12 acres was rough pasture. Difference in size was evidently not an important factor in determining difference in net incomes between the two groups. There also was little difference in the acreage of the more important crops.

One important factor favoring the more profitable farms was that of higher crop yields. They produced about 6 bushels more corn, 6 bushels more oats, 7 bushels more wheat, and 6 bushels more barley per acre than the less profitable farms. Since it usually costs little more to produce an acre of high-yielding crop than an acre of low-yielding crop, this extra yield counts toward a larger net income.

The biggest factor favoring the more profitable farms was that of more efficient management and feeding of livestock. The most successful farm operators secured an average livestock income of $225 for each $100 worth of feed fed as compared with a corresponding income of $140 for each $100 worth of feed fed by the less successful operators. Livestock income must cover other costs besides feed, including such items as labor, pasture, shelter, and interest. Dairying is the largest livestock enterprise on these farms and it requires much labor and equipment. It is evident that the less successful farmers realized little if any profit on their feeding operations. The greater feeding efficiency on the more profitable farms is shown also in the fact that these farms with only 373 bushels more grain produced per farm fed more livestock and still had $348 of crop income above the cost of purchased feed, while the less successful farmers spent $294 more for feed than their crop income amounted to. The more successful farmers were able to make their grain go farther partly because they had more acres in alfalfa hay. Alfalfa is admittedly the best dairy hay and 15 of the most profitable 18 farms had some alfalfa, the average being $8\frac{1}{2}$ acres per farm. Only 8 of the least profitable 18 farms had alfalfa and they averaged

6 acres per farm. Greater livestock efficiency on the more successful farms is further substantiated by the figures showing returns per $100 invested in all livestock as well as returns per $100 invested in cattle, hogs and poultry separately. The most profitable 18 farms with $7.06 more investment in livestock per acre produced $18.68 more livestock income per acre.

The dairy enterprise produced about 81 percent of the income on the farms included in this report. This was divided into 66 percent from milk and milk-products and about 15 percent from dairy cattle. Efficiency in dairy production and marketing therefore is by far the most important factor affecting success on these farms. Most of the farm operators have recognized this in joining and helping to maintain dairy herd improvement associations. The most profitable 18 farms averaged 19 cows per farm and $218 of dairy sales per cow as compared with 15½ cows and $160 dairy sales per cow on the least profitable 18 farms.

On the expense side of the account the more successful farmers had $1.50 more labor cost per acre but they had $1.05 less equipment cost and 23 cents less improvements cost per acre. The difference in gross income was much greater than the difference in expense. The situation is summed up in the figures showing gross income and expense per acre. The most profitable farms produced a gross income of $46.52 with an expense of $20.04 an acre as compared with $25.16 income and $21.29 expense on the least profitable farms. This resulted in net incomes of $26.48 and $3.87 an acre respectively for the two groups.

Comparative Earnings on Some Select Farms in the Chicago Dairy District for 1926, 1927 and 1928

Item	1926	1927	1928
Number of farms	35	60	54
Average size of farms, acres	161	154	144
Average rate earned, percent	4.9	5.0	6.5
Average value of land per acre	$135	$128	$133
Average investment per acre	226	224	224
Investment in livestock per farm	4 404	4 673	4 126
Investment in cattle per farm	3 458	3 691	3 299
Investment in hogs per farm	338	342	264
Investment in poultry per farm	164	178	156
Gross income per acre	32.07	32.84	34.42
Operating cost per acre	20.92	21.56	19.81
Net increase from crops per farm	--	--	191
Miscellaneous income per farm	41	49	63
Livestock income per farm	5 129	5 008	4 704
Cattle income per farm	484	601	783
Dairy sales per farm	3 763	3 782	3 298
Hog income per farm	601	329	317
Poultry income per farm	264	278	293
Gross income per farm	5 170	5 057	4 958

DuPage, McHenry, Cook, Kane Counties - 1928

Item	Your farm	Average of 54 farms	18 most profitable farms	18 least profitable farms
Capital Investments - Total	$	$32 297	$29 675	$33 245
Land		19 137	16 970	19 834
Farm improvements		5 677	5 533	6 228
Machinery and equipment		1 650	1 438	1 645
Feed, grain and supplies		1 707	1 578	1 643
Livestock - Total		4 126	4 156	3 895
Horses		391	399	399
Cattle		3 299	3 427	2 919
Hogs		264	142	391
Sheep		13	13	26
Poultry		156	175	150
Dogs		3	---	10
Receipts - Net Increases - Total	$	$ 4 958	$ 6 141	$ 3 673
Feed, grain and supplies		191	348	---
Labor off the farm		56	56	35
Miscellaneous		7	7	12
Livestock - Total		4 704	5 730	3 626
Horses		---	---	---
Cattle		783	1 011	504
Hogs		317	209	358
Sheep		7	9	12
Poultry		101	144	65
Egg sales		192	208	187
Dairy sales		3 298	4 149	2 483
Dogs		6	---	17
Expenses - Net Decreases - Total	$	$ 1 762	$ 1 548	$ 2 130
Farm improvements		161	152	202
Machinery and equipment		451	330	518
Feed, grain and supplies		---	---	294
Dairy expense		77	76	82
Misc. livestock expense		29	26	38
Miscellaneous crop expense		206	180	164
Hired labor		450	386	444
Taxes, insurance, etc.		320	323	326
Miscellaneous expenses		29	20	30
Horses - decreases		39	55	32
Miscellaneous livestock decreases		---	---	---
Receipts less expenses	$	$ 3 196	$ 4 593	$ 1 543
Total unpaid labor		1 091	1 098	978
Operator's labor		719	717	720
Family labor		372	381	258
Net income from investment and management		2 105	3 495	565
Rate earned on investment	%	6.52%	11.77%	1.70%
Income left before paying for operator's labor		2 824	4 212	1 285
5 percent of Capital Invested		1 615	1 484	1 662
Labor and management wage	$	$ 1 209	$ 2 728	$ - 377

DuPage, McHenry, Cook, Kane Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 54 farms	18 most profitable farms	18 least profitable farms
Size of farm - acres		144.0	132.0	146.0
Percent of land area tillable	%	83.3%	86.3%	79.5%
Acres in Corn		38.0	36.0	35.0
Oats		20.0	22.0	21.0
Wheat		5.0	2.0	9.0
Barley		17.0	15.0	16.0
Crop yields - Corn, bu. per acre		42.2	42.0	35.7
Oats, bu. per acre		49.1	51.4	45.7
Wheat, bu. per acre		20.5	25.8	18.2
Barley, bu. per acre		38.0	39.2	33.5
Return per $100 of feed fed to productive livestock		176	225	140
Returns per $100 invested in all productive livestock		124	145	108
For $100 in Cattle		122	144	106
Hogs		121	119	100
Poultry		177	196	162
Investment in productive livestock per acre		26.31	30.09	23.03
Receipts from productive livestock per acre		32.68	43.52	24.84
Man labor cost per acre		10.70	11.24	9.74
Crop acres per man		50.3	49.4	53.4
Crop acres per horse (with tractor)		26.4	25.5	29.8
(without tractor)		19.3	19.1	18.7
Expenses per $100 gross income		58.00	43.00	85.00
Machinery cost per acre		3.13	2.50	3.55
Farm improvements cost per acre		1.12	1.15	1.38
Gross receipts per acre		34.43	46.52	25.16
Total expenses per acre		19.81	20.04	21.29
Net receipts per acre		14.62	26.48	3.87
Farms with tractor	%	74.1%	61.1%	66.7%
Value of land per acre		133	129	136
Total investment per acre		224	225	228

Find Your Farm Leaks

DuPage, McHenry, Cook and Kane Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farms in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse				
											Tractor	No tractor			
13.5	63	70	34	262	261	317	40	46	7.20	85	40	33	23	55	285
12.5	60	67	32	242	241	297	38	44	7.70	80	38	31	28	52	265
11.5	57	64	30	222	221	277	36	42	8.20	75	36	29	33	49	245
10.5	54	61	28	202	201	257	34	40	8.70	70	34	27	38	46	225
9.5	51	58	26	182	181	237	32	38	9.20	65	32	25	43	43	205
8.5	48	55	24	162	161	217	30	36	9.70	60	30	23	48	40	185
7.5	45	52	22	142	141	197	28	34	10.20	55	28	21	53	37	165
6.5	42	49	20	122	121	177	26	32	10.70	50	26	19	58	34	145
5.5	39	46	18	102	101	157	24	30	11.20	45	24	17	63	31	125
4.5	36	43	16	82	81	137	22	28	11.70	40	22	15	68	28	105
3.5	33	40	14	62	61	117	20	26	12.20	35	20	13	73	25	85
2.5	30	37	12	42	41	97	18	24	12.70	30	18	11	78	22	65
1.5	27	34	10	22	21	77	16	22	13.20	25	16	9	83	19	45
0.5	24	31	8	--	--	57	14	20	13.70	20	14	7	88	16	--
-1.5	21	28	6	--	--	37	12	18	14.20	15	12	5	93	13	--

A Budget for the Farm Business

The practice of budgeting is now accepted as necessary to good management in nearly all lines of commerce and industry as well as in government. It can be and in a few cases has been successfully applied to farming. A budget is a plan for using or spending the resources of the business. On the farm these resources include land, labor, power, equipment, seed, feed, livestock, and cash or credit. The budget may consist of a plan for several years ahead or it may be for only one year. As a rule there should be both a general plan for several years and a more definite budget for the next year.

Some folks are likely to say that there is no use in a budget for the farm business because changes in weather and prices will make it impossible to follow a definite plan. It is true, of course, that conditions will arise which make it necessary to substitute one crop for another when the planned crop fails or to supply more labor or power when wet spells keep men and teams out of the fields for days during the rush season. The price outlook, too, may change from what was expected and make it advisable to feed the hogs to lighter or heavier weights, or to sell grain at a different time.

These changes, however, do not destroy the value of a definite plan. They do make it necessary to plan substitute crops and substitute ways of doing the work when adverse weather conditions are met. Most other industries have less disturbances from weather but they do have strikes, changes in price, and uncertain factors which frequently make it necessary to modify plans. Few, if any, businesses are so blessed with stable conditions that a year's work can be laid out in the form of a budget and allowed to run without change. These unexpected changes make it impossible to run business entirely by rule. Business on the farm or anywhere else probably will always require the constant supervision of men of good judgment to meet the ever-changing conditions as they appear.

Actual accounts from hundreds of farms scattered all over the state have shown year after year that those farms which stand out as successful during this period of "hard times" are farms whose operators have been following definite, well thought out plans. Hit or miss operation without plan or system seems doomed to failure under present conditions.

How then can a farm operator go about the job of making plans and budgets? Winter is the best time of year to plan. Evenings are long and outside work is not so pressing. The day's work still leaves enough energy for thought. First there should be a long-time general plan as to what kinds of crops and livestock to produce. The "Farm Business Reports" for 1927 included a detailed discussion of the main considerations in selecting a cropping system. The same series of reports for 1928 discussed other factors involved in making a long-time plan for the farm with a list of the factors which bring success. These discussions cannot be repeated here for lack of space.

The successful farm operator usually has a plan for soil improvement. It may cover a period of years and be very simple, but as the years roll by his yields are maintained or improved. He has a definite cropping plan which he follows as closely as weather conditions will permit. In case a crop fails he knows in advance what he will substitute for it to avoid disrupting his plans for feed, labor, soil improvement, and equipment. The substitute crop should provide also for getting back to the regular, planned rotation as quickly as possible. It takes determination to stick to a crop rotation, but it pays in the long run as proved on a large number of successful farms. The cropping plan should be selected with

due consideration of the kinds of livestock to be kept. The numbers of livestock should be adjusted to the available feeds, the labor supply, and the markets. The entire long-time plan should avoid waste of resources of the farm business, especially labor, which is the largest single item of operating cost.

With the long-time plan recorded, the farm operator is ready to draw up a definite budget for the next year. At this point the man who has kept accounts and other farm records is far ahead of the one who has not. Past records are very useful in making future plans. It is necessary, of course, to look into the future in drawing up a plan or budget, but we can look into the future best by knowing the past and modifying past performance in the light of present and prospective conditions.

Budgeting the crops. We may begin by planning the production and disposal of crops. It is assumed that the long-time cropping plan has been made. The first step is to draw a map of the farm for the coming year and to enter on it the crop to be grown and the number of acres in each field. To illustrate this and other steps in making a budget we will use a budget for an actual central Illinois farm. This farm is especially well organized and its operator has kept accounts for several years. The accounts have shown it to be much more successful than the average farm. Page 11 shows a map of this farm. It contains 200 acres, has a five-year rotation of corn, corn, oats, wheat, and clover, and all main fields except one contain 40 acres each. Besides a good crop rotation the soil plan has included the application of some rock phosphate. The livestock enterprises consist of 10 to 15 Shorthorn cows kept to produce calves and milk, 10 to 12 brood sows which farrow two litters a year, and a small flock of about 115 hens. The power supply includes 4 to 6 brood mares and a small tractor. As shown on the map, part of the clover field is fenced off for hay each year, using a temporary fence.

The second step is to prepare a form such as shown on page 12. Here are listed the acreage, yield, total production, and carry-over of crops. This budget is made as of January 1 and the carry-over is the same as the January 1 inventory. The estimate of yield is made on the basis of the average yields on this farm for the last four years. In this case slightly less than the average figure was used in order to be conservative and avoid disappointments. The man who has kept no record of yields will have to draw on his memory or upon average figures for his locality. For these and for other average figures needed in making a budget the tables showing average yield, income, expense, and investment figures on farms keeping accounts may be taken from the foregoing tables in this report, pages 4 and 5. The production and carry-over together give the amounts of crops available for seed, feed, sale and carry-over for the next year. Seed requirements can easily be estimated when the proposed acreage of each crop is known. This is as far as we may go in crop disposal until the budget for feeds is made.

Budgeting Feeds. The third step is the making of a feed budget. The form for this is shown on page 13. We first list the numbers of livestock on hand, keeping in mind our estimate of the numbers to be born. This estimate is based on previous experience and market outlook. We also plan the method of feeding and the length of feeding periods. With these plans made we are ready to estimate the kinds and amounts of feed needed for the year.

Many farm operators have neglected estimating their feed requirements in advance because of the difficulties involved in knowing quantities of feed needed by different kinds of livestock fed or pastured under different conditions. As a result of making no definite estimate the feed supply often runs short, feed has

to be purchased on an emergency basis, or the livestock have to be kept on short unprofitable rations, or sold on an unsuitable market.

To estimate the quantities of feeds needed, some tables of feed requirements for different kinds of livestock under different conditions are helpful. No tables that are entirely adequate are available at present but some partial tables based on accounts and feed records on Illinois farms were included in the "Farm Business Reports" for 1928. These are repeated on pages 17 and 18 of this report.

With the numbers and plans for livestock known and with feed requirement tables we can estimate the quantities of different kinds of feed needed for each class of livestock as shown on page 13. It is best to include here quantities of feeds to be bought as well as quantities of home-grown feeds, since each depends upon the other. The best tables of feed requirements for any particular farm can be made by keeping records or careful estimates of feeds used each year for each kind of livestock and basing future plans on past experience.

With the tables of feeds made out as shown on page 13 we are ready to complete the table of crops, page 12. We have entered here the totals of each crop needed for feed. On this particular farm the practice is followed of carrying over a liberal supply of feed into the next year and the quantities to be carried over for 1930 have been included in the table. If it were expected that any particular feed would run out before the 1929 crops will be ready we should add the necessary purchase to the columns of purchased feed in the feed table, page 13. Finally, we can enter the quantities of crops to be sold. These quantities are found by subtracting the amounts of crops to be used and carried over from the total amounts of those carried over from the previous year and of those raised in the present year. To get the value of crop sales we must estimate the probable farm price. For use in this budget we have used conservative figures with the expectation that the actual income will be above rather than below our estimates. Price estimates should be based on past experience supplemented by the available information as to world and national supplies on hand, crop prospects in the southern hemisphere and probable demand, especially as influenced by numbers of livestock on hand to consume feed crops. Information of this kind is available about February 15 of each year in the national and state "Outlook Reports." It is brought up to date from time to time in a monthly publication of the U. S. Department of Agriculture called "The Agricultural Situation." Applying the estimated prices to the quantities to be sold we have an estimate of income to be expected from crop sales.

Budgeting Livestock Products. The budget for production and disposal of livestock and livestock products is the fourth step and is next in order. The form is shown on page 14. We have previously estimated the numbers of livestock to be raised and the weights to which they will be fed. We need also to estimate quantities of dairy and poultry products to be produced. Here again past experience is the best guide and records of past production are very valuable. Following this estimate of production there should be an estimate of the quantities of pork, poultry, milk, etc., to be used by the family and hired help. Deducting these amounts there remain the quantities of livestock products which should be available for sale. Again we estimate the probable prices to be received. Here we are guided by a knowledge of seasonal variations in prices of different kinds of livestock products, by a study of price cycles including present and future position within the cycle, by storage holdings of livestock products, and probable demand as influenced by prospective business conditions. This information is also reviewed in the national and state outlook reports and in "The Agricultural Situation." Applying the estimated prices to the quantities to be sold we have an es-

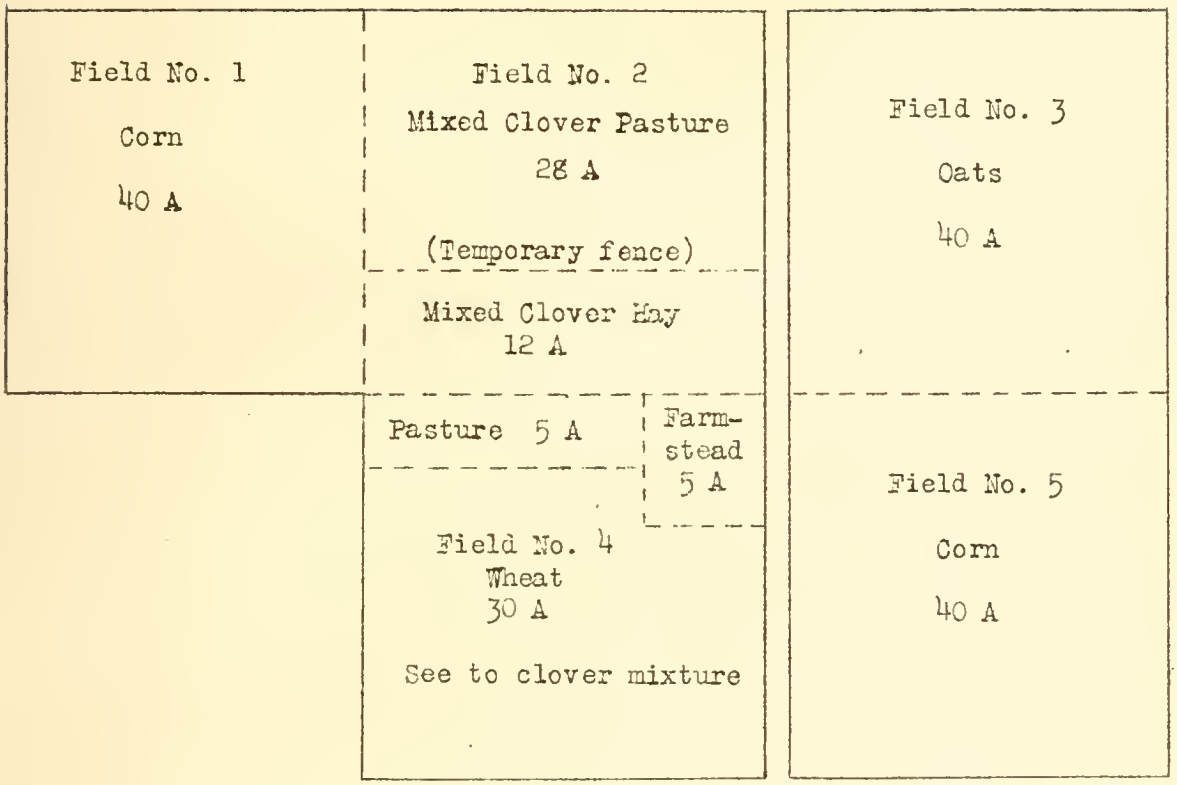
timate of the gross income from livestock.

Budgeting Income and Expenses. With the budget for crops, feeds, seeds and livestock complete, we are prepared for the fifth step which is to set up the budget of income and expense as shown on page 15. The income figures are taken from the tables of sales of crops and livestock. The expense figures in this case were taken from accounts kept on this particular farm over the past four years. Where no accounts are available most items of expense can be estimated by consulting cancelled checks and other records. The average figures given in the foregoing tables on page 4 will help to suggest the items of expense. In these tables depreciation on improvements and equipment is included, altho it is not an actual cash expense and will not be included in the list of expenses in the budget. The item of crop expense includes purchased seed, and bills for threshing, twine, shelling, etc. When the table of income and expense is complete the expense is subtracted from the estimated gross income. The difference represents the probable income left at the end of the year to cover depreciation, unpaid labor of the operator and his family, interest on the invested capital and compensation for the risk and management involved in operating a business. The item of depreciation must cover the decreasing value of buildings, fences, machinery, limestone, and phosphate previously applied to the land, and mature horses or cows which become less valuable with age. The table on page 16 shows the distribution of income remaining after actual expenses are paid on the particular farm used in making this budget. This table is of interest in bringing out the items necessary to be covered by the farm income if the business is to be profitable as measured by standards commonly accepted in other lines of industry and commerce.

It will often pay to make out budgets for different ways of operating the same farm and estimating the probable net income which may result from these different systems. The different plans may involve different kinds and acreages of crops and different kinds and numbers of livestock. It may be of value also to figure on a basis of different kinds of power and equipment which require different amounts of labor.

The budget should be followed by keeping accounts. Much of the value of any budget will be lost if accounts are not kept which will make it possible to see how closely the business follows the budget. Improvement of future budgets also depends on keeping suitable accounts which give a more accurate basis for future plans. The greatest value of such a budget as we have outlined lies in the fact that it leads to clear thinking at a time when the farm operator is free to think. If substitute plans are included to take care of the most likely emergencies such as failure of wheat or clover crops or the occurrence of wet weather in rush seasons, the operator will have less need to depend on snap judgments.

Crop Map for 1929



Crop Plan for Future

Field 1	Field 2	Field 3	Field 4	Field 5
Oats 1930	Corn 1930	Wheat 1930	Clover 1930	Corn 1930
Wheat 1931	Corn 1931	Clover 1931	Corn 1931	Oats 1931
Clover 1932	Oats 1932	Corn 1932	Corn 1932	Wheat 1932
Corn 1933	Wheat 1933	Corn 1933	Oats 1933	Clover 1933
Corn 1934	Clover 1934	Oats 1934	Wheat 1934	Corn 1934

PROBABLE PRODUCTION AND DISPOSAL OF CROPS

(All quantities expressed in bushels or tons)

Crops	Acres	Yield	Production	Carry-over from 1928	Total available	Disposal				
						Seed	Feed	Carry-over to 1930	Sales	
									Quantity	Value
Corn	80	60	4800	3000	7800	15	3130	3000	1655	$1241.25
Oats	40	50	2000	1000	3000	100	930	1000	970	339.50
Wheat	30	25	750	-	750	50	-		700	770.00
Hay (mixed)	12	2	24	20	44	-	22	22	-	
Oat straw	40	3/4	30	40	70	-	40	30	-	
								Total expected crop sales		$2350.75

Estimated Feed for Livestock

Livestock	Home-grown feeds		Purchased feeds		
Kind and numbers	Kind	Amount, bushels or tons	Kind	Amount (pounds)	Cost
Horses	Corn	-			
4 mature	Oats	500			
3 colts	Hay	5			
	Straw	10			
Cattle					
10 cows and spring calves	Corn	550	Cotton-seed	3500	$100
7 calves of 1928	Oats	200		1000	19
10 yearlings	Hay	17	Bran		
	Straw	30			
Hogs					
12 sows with spring and fall litters	Corn	2500	Tankage	2000	87
	Oats	200	Oilmeal	2000	65
60 fall pigs of 1928			Alfalfa meal	2000	45
Chickens					
110 hens	Corn	80	Tankage	400	18
200 chicks	Oats	30	Shorts	1000	20
Total expected feed purchases					$354

Probable Production and Disposal of Livestock and Livestock Products

Livestock products	Production*	Disposal		
		Used in home	Sales	
			Quantity	Value
Beef.	10,000 lbs.	-	10,000 lbs.	$1200
Pork.	31,500 "	1,500 lbs.	30,000 "	2700
Butterfat (including milk and cream) .	1,850 "	200 "	1,650 "	660
Eggs.	1,500 doz.	200 doz.	1,300 doz.	260
Poultry	600 lbs.	150 lbs.	450 lbs.	115
Total expected income from livestock				$4935

*If colts are raised and sold they should be included.

Probable Receipts and Expenses

Receipts		Expenses	
Crops	$2 350	Seed	$ 75
Livestock	4 935	Other crop expense (Twine, threshing, shelling, etc.)	100
		Feed	310
		Other livestock expense (Serum, veterinary, medicine, etc.)	50
		Hired labor	650
		Equipment, repairs, and supplies, including gas and oil	225
		New machinery	50
		Improvement repairs (Paint, fence repair, etc.)	50
		Improvements, new (Buildings, fence, limestone, phosphate)	75
		Taxes	325
		Insurance	15
		Interest	--
		Total expenses	$1 925
		Income less expenses	5 360
	$7 285		$7 285

Distribution of Income

(This is not a part of the budget, but shows the items to be covered by the income left after actual expense is paid.)

Items to be covered by income remaining after cash expense is paid		Amount
Gross income less expense		$5 360
Depreciation (based on beginning inventory)		
Horses 10% after 9 years of age $55		
Buildings 2% 192		
Fencing 10% less repairs 64		
Phosphate, 10% 75		
Total depreciation	$ 386	
Labor not paid		
Operator $720		
Other members of family 300		
Total unpaid labor	1 020	
Total expense not included in budget	$1 406	
Net operating income to cover investment and management		3 954
Capital returns, 5% on $58 000	2 900	
Amount remaining as pay for management and risk		1 054

Table of Feed Requirements -- Farm Conditions

(Amounts given are per head, per year except as indicated otherwise)

Class of livestock	Grain pounds	Supplements	Legume hay or equivalent roughage	Non-legume roughage, straw and stover	Silage pounds	Pasture days
Work Horses						
Champaign-Piatt Counties 1920-1926	2650		1800	1900		175
Knox-Warren Counties 1923-1925	2750		2500	1750		130
Yearlings - grade colts	1000		2000	1500		200
Dairy Cattle (dairy cost records 1926)						
5000 lb. production	1100	500	1700	1200	5000	150
7000 lb. production	1600	550	1900	700	6700	150
9000 lb. production	1800	800	2300	300	7400	150
Hogs Breeding Herd (McLean Co. 1924-1926)						
Brood sow (per year)	1400	80				Pasture
Breeding herd and pigs per 100 lbs. gain	460	25				in
Fattening pigs after weaning per 100 lbs. gain	435	23				season
Beef Cattle - Herd (with silage)	(Cow and calf					
Cow	may easily		800-1000	1500	5000	180
Calf 6 months after weaning	use 500-1000		700-900	500	2500	
Yearling stocker	lbs. grain)		800	1000	3500	180
Sheep						
(1) Ewe (without silage)	125		300			Pasture
(2) Ewe (with silage)	150		150		300	in season
Lambs on full feed per 100 lbs. gain (25 lbs. gain per lamb)	400		500			
Poultry						
Laying flock (per 100 hens per year)	5400	600				
Pullets to 5 months of age						
Egg breeds (100 hen basis)	1800	200				
American breeds (100 hen basis)	2250	250				

Table of Feed Requirements -- Farm Conditions

(Amounts per 100 pounds gain, dry lot conditions)

Beef Cattle, fattening	Daily gain pounds	Days fed	Grain pounds	Supple-ments	Legume hay or equivalent roughage	Non-legume roughage, straw and stover	Silage pounds	Pasture days
With Silage								
Calves 400 to 550 pounds	1.4	212	430	30	75	125	1400	10
Yearlings 550 to 750 pounds	1.5	199	460	35	125	200	1500	15
Medium steers 750 to 950 pounds	1.5	166	640	50	150	230	1700	10
Heavy steers 950 to 1100 pounds	1.7	146	825	45	200	250	1300	10
Without Silage								
Calves 400 to 550 pounds	1.7	209	650	5	300	85	--	8
Yearlings 550 to 750 pounds	1.7	219	700	5	370	100	--	18
Medium steers 750 to 950 pounds	1.9	155	875	5	400	95	--	12
Heavy steers 950 to 1100 pounds	2.2	124	950	10	400	80	--	5

SUMMARY OF FINANCIAL SURVEY

ON 100 FARMS IN

LAKE COUNTY, ILLINOIS

1928

This report shows average conditions in the Chicago fluid milk district for 1928. The records were taken from farms just as they came without selection except to exclude those where farming was not the chief business of the farm operator. Small holdings near town and summer homes were thus eliminated.

University of Illinois, College of Agriculture, Department of Farm Organization and Management

Urbana, Illinois
March, 1929
M-102

SUMMARY OF FINANCIAL SURVEY ON 100 FARMS IN LAKE COUNTY, ILLINOIS FOR 1928

Prepared by H. C. M. Case and R. R. Hudelson

A study of 100 farms in Lake County, Illinois, for the year 1928, shows that on an average the operators of these farms received 1.56 percent on the total farm investment. This return of 1.56 percent on the investment represents the pay a man received for both the use of capital and his managing ability, since the operators had been allowed only hired man's wages in determining the income. If we were to allow even one percent on the total farm investment for a man's managing ability, which would be just about $300, it would leave only one-half of one percent return on the farm investment. These farms had an average investment of $29,669, about two-thirds of which was represented in the value of land, while the remainder was divided between farm improvements, machinery, livestock, feed and other supplies. The earnings can be expressed in another way, by saying that the average man lacked $306 of getting any return for his own labor and management, after paying all operating expenses and allowing 5 percent interest on the investment.

These farms are typical of the dairy region about Chicago that supplies a portion of the fluid milk used in Chicago. The farms are located in the southwest part of Lake County. Only farms typical of the area were recorded; that is, farms of extremely large acreage, those owned as country homes, or very small tracts near town were omitted. The farms included in the study represent a good cross-section of those whose main business is farming. The farms average 151 acres in size, which is typical for that part of the state. Practically all crops grown on these farms are used as feed for the dairy herds and other livestock. The acreages of different crops were as follows: corn, 35 acres; oats, 19 acres; wheat, 4 acres; barley, 15 acres. While some grain was sold from the farms, there were also large purchases of feed so that the actual sales of crops exceeded purchases of feed by only $37 per farm. The sale of poultry and eggs per farm amounted to $310, and the sale of hogs $276, while the sale of dairy products amounted to $2,098. This brings out rather clearly that the organization of the entire farm is built around the dairy enterprise, since it supplied more than 75 percent of the gross income.

On an average, the land was valued at $125 an acre, which represents conservative farm values even before the World War. Suburban land values were not permitted to result in valuing the farm land above what it should be worth for productive purposes. On an average, the income was $20.31 an acre, excluding produce from the farm used in the farm home. This produce will ordinarily amount to about $500 at farm prices, but is counted in as part of the return for labor on the farm. The operating expenses per acre amounted to $17.24, which, of course, does not include any interest on the investment in the farm business. Labor, including operator and other family labor, was the largest single item of operating cost, amounting to $1,404 a farm. Excluding feed purchases which were balanced against crop sales, labor costs amounted to more than half of all other operating costs. Feed purchases averaged $422 a farm. Other large items were $364 for machinery and equipment, $290 for taxes and insurance, and $283 for improvements.

These hundred farms give a good cross-section picture of agricultural conditions in the Chicago fluid milk area for 1928. The earnings of 1928 were a little below what they had been in the previous two years, as shown by records kept by a good many farmers thru that area. The reasons for the low earnings in 1928 include a poor crop year in 1927, which made it necessary to buy considerable feed before harvesting the 1928 crop, and the fact that the cost of feed advanced over the previous year, while the price of milk did not change with the cost. Also, the selling of many cattle, as a result of tuberculin testing, has reduced the herds on some farms. This has reduced the volume of business which some of the farms are carrying on.

If present conditions on farms of this area be compared with conditions prevailing before the war, it is found that while farm prices have increased, farm costs have increased more. This has reduced the spread between cost and income, thereby reducing the farmer's net income. The hired man who drew a labor wage of $35 and board in 1914 today draws $60 and board, an increase of 70 percent. The manure spreader which cost $110 in 1914 today costs $170, an increase of 55 percent. Farm building materials have increased over 60 percent in price since 1914. During the same interval the farmer's price for milk has only increased about 52 percent. Milk which brought $1.60 a hundred pounds in 1914 brought $2.44 in 1928. This situation was only aggravated by the war period when prices and costs both moved up to high levels for a short interval, after which prices dropped faster and farther than costs. While these factors have reduced the net income of the farmer, members of his family have found that their smaller income in dollars is reduced still more when they try to exchange it for clothing and other necessities of life.

Differences Between Profitable and Unprofitable Farms

While the level of farm incomes on these farms for 1928 was clearly too low and many of the factors are not under the control of the farm operator, there is some encouragement in the fact that part of the farms studied were fairly successful. There is some value to be found in studying the differences between those farms which show a fair degree of success and those which do not. The tables on pages 4 and 5 bring out these differences by comparison between the one-third that were most successful and the one-third which were least successful. We use the term "more successful" here not as indicating prosperity, but as indicating a greater success in holding ones own financially.

Of the 100 farms whose records were secured the 33 which were most successful show an average rate of return on the investment amounting to 5.6 percent. This must cover the return to management as well as to capital, since the operators included only a labor wage of $60 a month for themselves in the expenses. In other words, they would be about as well off to invest their capital in 5.6 percent securities and work for farm wages if they were provided as good a house and as much farm produce as they get at present. The least successful 33 farms show a loss of 3.8 percent on their capital after allowing themselves only a labor wage. Another way of stating the case is to say that there was $2,567 difference between the two groups in their average net income per farm.

The most successful third of these farms averaged somewhat larger with 163 acres per farm as compared to 119 acres for the least successful third. The former group showed an average investment of $31,815 as compared to $22,744 per farm for

the latter group. The percentage of tillable land was about the same for both groups. Judging by other similar studies of farm incomes it seems doubtful whether difference in size was a very important factor behind the difference in income.

Undoubtedly the chief difference between these two groups of farms lies in the size and efficiency of the dairy enterprise. This is reflected in the fact that the most successful third averaged 21 cows per farm and $162 sales per cow while the least successful third averaged 9 cows per farm and $137 sales per cow. This accounts for three-fourths of the difference in their gross incomes and since there was little difference between the two groups in average expense per farm it accounts for more than three-fourths of the difference in net income. The least successful farms with fewer cows, fewer chickens, and about the same number of hogs bought nearly as much feed. They had less acres in crops but evidently the chief reason for buying so much feed was less efficient feeding since these farms carried less livestock per acre as well as less livestock per crop acre than the 33 most successful farms. There was little difference between them in crop yields but the most successful group sold more crops than they bought feed while the least successful group bought more feed than they sold crops. The average expense for purchased feed was $468 on the first group of farms and $345 on the second group.

The most successful farm operators show a higher labor efficiency as indicated by their average labor cost of $8.88 an acre with more cows and more chickens while the least successful third show an average labor cost of $11.02 an acre. Other expenses besides feed and labor ran higher on the least successful farms in spite of their lower incomes. The expense per acre on these farms averaged $21.58 as compared to $16.31 on the farm of the most successful group. With a gross income of $27.27 an acre, the most successful farm operators had a net income of $10.96 an acre while the least successful ones with a gross income of $12.26 an acre had a net loss of $7.32 an acre. No interest on the investment is included in these figures.

After consideration of these records the conclusion seems evident that there are opportunities for improvement on the less successful farms. The most promising opportunities seem to lie in more efficient cows more efficiently fed and in changes which will give more income for the labor used. More cows per farm is one possible means of increasing labor efficiency provided good cows can be added without greatly increasing the amount of feed to be bought. Care and efficiency in handling the poultry flock seems to offer some opportunity also. Flocks averaged somewhat larger on the more successful farms and sales from eggs and poultry were considerably larger. They averaged $2.65 a hen on the most profitable farms but only $1.55 a hen on the least successful farms. The hog enterprise was small on nearly all of these farms. This is to be expected since it is chiefly a whole milk marketing district and the available grain is needed for cows. There was an average of less than three brood sows per farm.

Survey, Lake County - 1928

	Your farm	Average of 100 farms	33 most profitable farms	33 least profitable farms
INVESTMENT				
Land	$	$18,913	$20,277	$14,313
Farm improvements		5,189	5,180	4,456
Machinery and equipment		1,304	1,423	1,028
Feed and supplies		1,420	1,454	1,099
Livestock		2,843	3,481	1,848
Horses		360	461	274
Cattle		2,107	2,584	1,252
Hogs		207	249	171
Sheep and bees		13	29	3
Poultry		156	158	148
Capital Investment - Total		29,669	31,815	22,744
INCOME				
Feed and grain		37	161	--
Miscellaneous		50	85	41
Livestock - Total		2,980	4,199	1,657
Horses		--	--	--
Cattle		240	390	60
Hogs		276	346	182
Sheep		56	24	4
Poultry		111	183	80
Egg sales		199	247	155
Dairy sales		2,098	3.009	1,176
Receipts-Net Increases - Total.		3,067	4.445	1.698
EXPENSE				
Farm improvements		283	284	261
Horses		40	40	38
Cattle		--	--	--
Hogs		--	--	--
Sheep		--	--	--
Poultry		--	--	--
Machinery and equipment		364	351	327
Feed and supplies		--	--	239
Livestock expense other than feed		51	62	33
Crop expense		150	156	112
Labor hired		316	352	236
Taxes, insurance, etc.		290	296	230
Miscellaneous		21	21	17
Expenses-Net Decreases - Total.		1.515	1.562	1.493
Receipts less Expenses		1.552	2.883	205
Total unpaid labor		1,088	1,096	1,076
Operator's labor		713	720	707
Family labor		375	376	369
Net income from investment and management.		464	1,787	-871
Rate earned for capital and management		1.56%	5.62%	-3.83%

Survey, Lake County - 1928

Factors helping to analyze the farm business	Average of 100 farms	33 most profitable farms	33 least profitable farms
Income left before paying for operator's labor	$1,177	$2,507	$ -164
5 Percent of capital invested	1,483	1,591	1,137
Labor and management wage	-306	916	-1.301
Size of farm - acres	151	163	119
Gross receipts per acre	20.34	27.27	14.26
Total expenses per acre	17.26	16.31	21.58
Net receipts per acre	3.08	10.96	-7.32
Value of land per acre	125	124	120
Total investment per acre	197	195	191
Percent of land area tillable	71	71	70
Acres in Corn	35	39	29
Oats	19	20	16
Barley	15	16	9
Crop yields - Corn, bushels	38	37	37
Oats, bushels	42	47	37
Wheat, bushels	33	35	31
Returns per $100 invested in all productive livestock	113	131	96
For $100 in Cattle	106	124	88
Hogs	135	142	108
Poultry	174	213	146
Investment per acre in productive livestock	17.47	19.64	14.62
Receipts per acre from productive livestock	19.76	25.76	13.98
Man labor cost per acre	9.30	8.88	11.02
Crop acres per man	48	49	41
Crop acres per horse	22	22	21
Expense per $100 gross income	85	60	151
Machinery cost per acre	2.41	2.15	2.75
Building and fencing cost per acre	1.87	1.74	2.20

Factors That Influence Farm Profits

Accounts kept by several hundred Illinois farmers during the past thirteen years and analyzed by the Department of Farm Organization and Management of the College of Agriculture, University of Illinois, have shown that farms which are profitable and those which are not usually differ in one or more of the following factors:

1. Crop yields
2. Livestock efficiency
3. Labor efficiency
4. Amount of livestock
5. Power and equipment efficiency
6. Percentage of land in the more profitable crops
7. Thrift in controlling expense
8. Diversity of production
9. Volume of business
10. Adjustment of production to suit markets
11. Good arrangement of fields and buildings

For the farms included in this survey the greatest differences between the most successful and the least successful farms were in the second, third, and fourth of these factors: namely, livestock efficiency, labor efficiency, and amount of livestock.

Livestock efficiency involves many factors. First, livestock must be selected so as to be the right kind to fit the market, feed, and labor conditions. They must be able to give a maximum of products for a given amount of feed and labor. They must be kept healthy by good sanitation. They must be fed right so as to give the most produce at the least cost. Dairying is the chief livestock enterprise on the farm covered by this report and the source of over three-fourths of the income. It will pay farm operators of this locality, therefore, to make a special study of their efficiency in the dairy enterprise. Reports of the dairy herd improvement associations and the dairy enterprise cost studies conducted by the University in the Chicago dairy section throw a great deal of light on methods of securing efficiency in dairying.

Labor efficiency does not mean working the largest number of hours, altho it is evident that farms planned and operated to give profitable employment thruout the year have a big advantage over farms with heavy peaks of labor and other periods when there is little productive work to be done. Efficiency in use of labor in farming has been studied thru accounts on many farms. It is helped along by good yields, a well planned crop rotation which distributes the demand for labor thruout the growing season, large well planned fields, a good selection of livestock and suitable equipment. Power and equipment efficiency is usually increased by the same means that give increased labor efficiency.

The amount of livestock should be fitted to the supplies of feed and labor and to the available market. It usually is best to adjust the numbers of livestock kept to the feed crops produced in normal years and store the production of bumper crops to take care of the needs in years of low yields. Farm accounting studies have shown that in general livestock production is more profitable than selling feed crops provided the livestock are handled with a fair degree of efficiency.

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

WILL COUNTY FARM BUREAU

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June 1929

M-135

ANNUAL FARM BUSINESS REPORT

Will County, Illinois, 1928

Prepared by R. R. Hudelson, G. B. Byers, and H. C. M. Case*

The 30 farmers in Will County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 4.7 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $436, there remains a rate of 3.7 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $591. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is nothing left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $169 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $233 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms included in this farm accounting project in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Will County farmer earned about 2.7 percent on his investment for 1928 to pay for use of capital, risk, and management.

Farm earnings vary widely from year to year in many sections of the state but the records from Will County have shown little variation in rate earned for the last four years, due in part at least to the diversity in type of farming found on these farms. Earnings were low as compared with other representative lines of

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*L. W. Braham, farm adviser in Will County, cooperated in supervising and collecting the records used in this report.

business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1,910 larger net incomes than the third which were least successful.

The 10 most profitable farms averaged 20 acres larger than the 10 least profitable farms. Size of farm is usually not one of the most important factors in determining net earnings but an extra 20 acres offered some opportunity to use labor and equipment more efficiently and to build up a larger volume of business.

Larger crop yields favored the more profitable farms. They produced nearly 1 bushel less corn per acre but they produced 8 bushels more oats, 4 bushels more wheat and 3 bushels more barley. This is a smaller difference in crop yields than is commonly found between the two groups of more and less profitable farms. A smaller percentage of tillable land and a lower average valuation on land indicate that the 10 most profitable farms had land of lower natural productivity than the 10 least profitable farms.

The greatest single advantage of the more successful farm operators was a higher degree of efficiency in handling and feeding livestock. They realized a livestock income of $143 from each $100 worth of feed fed as compared with $116 income for $100 worth of feed fed on the less profitable farms. The livestock income must cover other costs besides feed, including such items as labor, pasture, shelter, interest, etc. It is the margin between cost and income which counts. The figures showing returns per $100 invested in livestock indicate that the more successful farmers gained most of their livestock advantage in the dairy enterprise. They had 16 cows per farm and dairy sales of $144 per cow compared with 8 cows per farm and $138 sales per cow for the less successful farmers. In all, the 10 most profitable farms show a little more than twice as much income from the dairy enterprise. They fed a larger number of cows and still had more crop income than the 10 least profitable farms.

With twice as many cows the more successful farmers still had lower costs per acre for labor as well as for machinery and equipment, but they had slightly higher costs for improvements.

The situation is summed up in the figures showing gross income and expense per acre. The 10 most profitable farms had an average gross income of $28.74 and an expense of $12.99 an acre as compared with $21.01 income and $14.16 expense on the 10 least profitable farms. This resulted in average net incomes of $15.75 and $6.85 an acre respectively.

The following table presents an interesting comparison of income and investment figures on some Will County farms for the past five years. A number of the same farms have been included each year. For the last four years the average rate earned has been remarkably uniform as compared with most other sections of the state. This probably is due to the diversity in type of farming in the county and to the size and importance of the dairy enterprise. The average dairy income has increased on these farms during the five-year period.

Comparative Earnings on Will County Farms

Item	1924	1925	1926	1927	1928
Number of farm records.	34	33	30	27	30
Average size of farm in acres . .	188	186	179	200	188
Average rate earned, percent. . .	6.3	4.1	4.3	4.6	4.7
Average value of land per acre. .	$167	$165	$166	$172	$169
Average investment per acre . . .	227	230	227	230	233
Investment in livestock per farm.	2,738	2,844	2,690	2,986	2,848
Investment in cattle per farm . .	1,425	1,520	1,487	1,496	1,567
Investment in hogs per farm . . .	539	610	501	777	613
Investment in poultry per farm. .	158	147	157	182	176
Gross income per acre	28.74	22.89	23.26	23.62	24.49
Operating cost per acre	14.50	13.40	13.48	13.02	13.44
Grain sales less feed purchases per farm	2,379	1,169	1,319	1,749	1,573
Miscellaneous income per farm . .	174	131	105	69	111
Livestock income per farm	2,856	2,949	2,739	2,905	2,911
Cattle income per farm.	522	536	481	635	431
Dairy sales per farm.	1,031	1,077	1,034	1,214	1,444
Hog income per farm	977	1,006	890	782	707
Poultry income per farm	267	271	299	249	298
Gross income per farm	5,409	4,249	4,163	4,723	4,595

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm, as well as on the farms of the group making the best profits and the group making the least profits.

Will County - 1928

Factors helping to analyze the farm business	Your farm	Average of 30 farms	10 most profitable farms	10 least profitable farms
Capital Investments - Total	$	$43 621	$45 467	$43 949
Land		31 775	32 651	33 372
Farm improvements		5 021	5 155	4 964
Machinery and equipment		1 859	1 877	1 389
Feed, grain and supplies		2 118	2 482	1 794
Livestock - Total		2 848	3 302	2 430
Horses		482	450	431
Cattle		1 567	2 192	1 213
Hogs		613	516	584
Sheep		9	11	9
Poultry		176	133	189
Bees		1	--	4
Receipts - Net Increases - Total	$	$ 4 595	$ 5 716	$ 3 747
Feed, grain and supplies		1 573	2 161	1 201
Labor off the farm		96	37	66
Miscellaneous		15	36	1
Livestock - Total		2 911	3 482	2 479
Horses		--	8	--
Cattle		431	432	343
Hogs		707	551	738
Sheep		31	18	3
Poultry		94	76	75
Egg sales		204	92	218
Dairy sales		1 444	2 305	1 102
Bees		---	---	---
Expenses - Net Decreases - Total	$	$ 1 632	$ 1 657	$ 1 667
Farm improvements		208	234	193
Machinery and equipment		479	421	463
Feed, grain and supplies		---	---	---
Misc. livestock expense		24	24	21
Dairy expense		19	44	7
Miscellaneous crop expense		178	187	204
Hired labor		400	403	451
Taxes, insurance, etc.		283	314	269
Miscellaneous expenses		30	30	28
Horses -- decreases		11	--	31
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 2 963	$ 4 059	$ 2 080
Total unpaid labor		889	927	858
Operator's labor		698	717	720
Family labor		191	210	138
Net income from investment and management		2 074	3 132	1 222
Rate earned on investment		4.75%	6.89%	2.78%
Income left before paying for operator's labor		2 772	3 849	1 942
5 percent of Capital Invested		2 181	2 273	2 197
Labor and management wage	$	$ 591	$ 1 576	$ -255

Will County - 1928

Factors helping to analyze the farm business	Your farm	Average of 30 farms	10 most profitable farms	10 least profitable farms
Size of farm - acres		187.6	198.9	178.3
Percent of land area tillable	%	89.5%	86.3%	91.6%
Acres in Corn		59.8	59.0	58.4
Oats		27.6	27.4	25.6
Wheat		26.5	24.9	23.4
Barley		17.8	16.6	17.8
Crop yields - Corn, bu. per acre		44.9	45.7	46.6
Oats, bu. per acre		45.6	51.3	43.4
Wheat, bu. per acre		21.8	23.2	19.0
Barley, bu. per acre		31.0	34.6	31.3
Returns per $100 of feed fed to productive livestock		139	143	116
Returns per $100 invested in all productive livestock		113	110	106
For $100 in Cattle		103	108	93
Hogs		127	116	119
Poultry		180	132	173
Investement in productive livestock per acre		13.76	15.87	13.17
Receipts from productive livestock per acre		15.52	17.47	13.90
Man labor cost per acre		6.87	6.69	7.34
Crop acres per man		88.7	84.1	84.2
Crop acres per horse (with tractor)		31.4	30.7	29.6
(without tractor)		21.0	20.0	21.1
Expenses per $100 gross income		54	45	67
Machinery cost per acre		2.55	2.12	2.60
Farm improvements cost per acre		1.12	1.18	1.08
Gross receipts per acre		24.49	28.74	21.01
Total expenses per acre		13.44	12.99	14.16
Net receipts per acre		11.05	15.75	6.85
Farms with tractor		76.7%	80.0%	60.0%
Value of land per acre		169	164	187
Total investment per acre		233	229	246

Find Your Farm Leaks

Will County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
11.7	66	66	36	243	267	320	27.75	29.50	3.40	120	45	35	20	45	320
10.7	63	63	34	223	247	300	25.75	27.50	3.90	115	43	33	25	42	300
9.7	60	60	32	203	227	280	23.75	25.50	4.40	110	41	31	30	39	280
8.7	57	57	30	183	207	260	21.75	23.50	4.90	105	39	29	35	36	260
7.7	54	54	28	163	187	240	19.75	21.50	5.40	100	37	27	40	33	240
6.7	51	51	26	143	167	220	17.75	19.50	5.90	95	35	25	45	30	220
5.7	48	48	24	123	147	200	15.75	17.50	6.40	90	33	23	50	27	200
4.7	45	45	22	103	127	180	13.75	15.50	6.90	85	31	21	55	24	180
3.7	42	42	20	83	107	160	11.75	13.50	7.40	80	29	19	60	21	160
2.7	39	39	18	63	87	140	9.75	11.50	7.90	75	27	17	65	18	140
1.7	36	36	16	43	67	120	7.75	9.50	8.40	70	25	15	70	15	120
0.7	33	33	14	23	47	100	5.75	7.50	8.90	65	23	13	75	12	100
-0.3	30	30	12	--	27	80	3.75	5.50	9.40	60	21	11	80	9	80
-1.3	27	27	10	--	--	60	----	3.50	9.90	55	19	9	85	6	60
-2.3	24	24	8	--	--	40	----	1.50	10.40	50	17	7	90	3	40

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Department of Farm Organization and Management

and

Grundy and Kendall County Farm Bureaus

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-four Farms

for

1928

The farm account is a guide to
more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May, 1929

M-128

ANNUAL FARM BUSINESS REPORT

Grundy and Kendall Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 34 farmers in Grundy and Kendall Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6.2 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $469, there remains a rate of 5.2 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1253. If it is assumed that the labor performed by the operator is worth $60 a month of $720 a year, there is $533 left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $153 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $211 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms included in this farm accounting project in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Grundy and Kendall County farmer earned about 4.2 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for these counties since 1924, but these earnings were low as compared with other

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*F. E. Longmire and M. H. Watson, farm advisers in Grundy and Kendall Counties, respectively, cooperated in supervising and collecting the records used in this report.

representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Com anies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2205 larger net income than the third which were least successful.

The 11 most profitable farms averaged 25 acres smaller than the 11 least profitable farms. About half of this extra land on the latter farms was tillable and the other half rough pasture. With only 12 acres difference in plow land it is doubtful whether difference in size of farm had much influence on difference in net incomes. Altho smaller in size, the more successful farms had a little larger acreage in corn and a smaller acreage of small grains.

One important factor favoring the more profitable farms was that of higher crop yields. They produced 6 bushels more corn, 3½ bushels more oats, 5 bushels more wheat, and 4 bushels more barley per acre than the less profitable farms. Higher yields under ordinary conditions mean lower cost of production per bushel of grain. This is because costs per acre usually do not go up in proportion to yields and there are more bushels over which to spread about the same amount of cost.

The most important factor contributing greater profits for the more successful farm operators was a higher efficiency in handling and feeding livestock. They realized a livestock income of $212 for each $100 worth of feed fed compared with a corresponding income of $139 for each $100 worth of feed fed by the less successful operators. Other costs besides feed must be met by the income from livestock, including such items as labor, pasture, shelter, interest, etc. It is the margin above these costs which counts in net income. This conclusion as to greater efficiency in handling and feeding livestock is borne out by the figures showing returns per $100 invested in cattle and hogs as well as in all livestock taken together. With the same average investment in livestock per acre, the 11 most profitable farms produced $3 an acre more livestock income.

The more successful farmers had somewhat higher labor costs but about the same costs for machinery and equipment per acre. With only 31 cents more operating expense they realized $12.56 more income per acre than the less successful farmers. The gross income per acre for the two groups averaged $31.01 and $18.45 respectively. Larger crop yields and more efficient livestock account for this difference. Altho the 11 most profitable farms were smaller in number of acres

they did a larger business. Their average gross income per farm was $6,007 as compared with $4,039 on the 11 least profitable farms. These like the records from many other areas indicate that there are opportunities on many farms to do a larger business without greatly increasing expenses. This may mean changes in the kind and size of enterprises or it may mean using proved methods to make the present enterprises yield more income.

The following table presents an interesting comparison of income and investment figures on accounting farms in Grundy and Kendall counties during the last four years. It is evident that 1928 was the best year of the four for net earnings. The improvement was due chiefly to increase in income from crops, dairy products, and poultry products.

Comparative Earnings on Some Farms in Kendall and Grundy Counties

Item	1925	1926	1927	1928
Number of farms included	21	34	24	34
Average size of farm in acres	179	203	220	222
Average rate earned, percent	4.7	4.2	5.2	6.2
Average value of land per acre	$155	$161	$158	$153
Average investment per acre	223	223	212	211
Investment in livestock per farm	2804	2900	2922	2499
Investment in cattle per farm	1165	1205	1035	1085
Investment in hogs per farm	771	776	865	524
Investment in poultry per farm	139	140	148	176
Gross income per acre	24.78	22.09	23.02	24.54
Operating cost per acre	14.20	12.61	11.85	11.57
Crop income less feed purchases per farm	1234	1454	2641	2793
Miscellaneous income per farm	85	50	45	62
Livestock income per farm	3110	2965	2394	2606
Gross income per farm	4429	4469	5080	5461
Cattle income per farm	763	629	483	480
Dairy sales per farm	325	364	446	585
Hog income per farm	1557	1503	1046	1065
Poultry income per farm	352	352	341	422

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

Grundy, Kendall Counties - 1928

Item	Your farm	Average of 34 farms	11 most profitable farms	11 least profitable farms
Capital Investments - Total	$	$46 874	$40 163	$46 338
Land		34 044	29 187	32 848
Farm improvements		5 624	4 049	6 735
Machinery and equipment		1 647	1 688	1 644
Feed, grain and supplies		3 060	2 776	2 539
Livestock - Total		2 499	2 463	2 572
Horses		631	606	669
Cattle		1 085	1 172	1 011
Hogs		524	432	638
Sheep		68	28	60
Poultry		176	222	152
Bees		15	3	42
Receipts - Net Increases - Total	$	$ 5 461	$ 6 007	$ 4 039
Feed, grain and supplies		2 793	3 245	1 619
Labor off the farm		51	50	33
Miscellaneous		11	3	14
Livestock - Total		2 606	2 709	2 373
Horses		--	15	--
Cattle		480	457	529
Hogs		1 065	1 044	1 170
Sheep		52	38	41
Poultry		203	216	138
Egg sales		219	282	191
Dairy sales		585	657	298
Bees		2	--	6
Expenses - Net Decreases - Total	$	$ 1 680	$ 1 480	$ 1 700
Farm improvements		244	203	287
Machinery and equipment		408	379	448
Feed, grain and supplies		--	--	--
Misc. livestock expense		37	30	35
Miscellaneous crop expense		199	178	180
Hired labor		403	360	347
Taxes, insurance, etc.		347	303	338
Miscellaneous expenses		33	27	31
Horses - decreases		9	--	34
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 3 781	$ 4 527	$ 2 339
Total unpaid labor		894	868	885
Operator's labor		710	720	687
Family labor		184	148	198
Net income from investment and management		2 887	3 659	1 454
Rate earned on investment	%	6.16%	9.11%	3.14%
Income left before paying for operator's labor		3 597	4 379	2 141
5 percent of Capital Invested		2 344	2 008	2 317
Labor and Management wage	$	$ 1 253	$ 2 371	$ - 176

Grundy, Kendall Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 34 farms	11 most profitable farms	11 least profitable farms
Size of farm - acres		222.5	193.7	218.9
Percent of land area tillable	%	89.3 %	91.8 %	87.9 %
Acres in Corn		87.0	84.3	78.8
Oats		38.5	37.0	41.3
Wheat		18.2	11.0	19.9
Barley		16.7	11.0	15.1
Crop yields - Corn, bu. per acre		43.8	45.5	39.4
Oats, bu. per acre		47.1	47.7	44.0
Wheat, bu. per acre		19.5	21.4	16.6
Barley, bu. per acre		29.1	29.9	25.9
Return per $100 of feed fed to productive livestock		160	212	139
Returns per $100 invested in all productive livestock		131	142	109
For $100 in Cattle		88	94	65
Hogs		205	237	179
Poultry		232	215	221
Investment in productive livestock per acre		8.97	9.81	9.98
Receipts from productive livestock per acre		11.71	13.91	10.84
Man labor cost per acre		5.83	6.34	5.63
Crop acres per man		104.0	100.6	107.9
Crop acres per horse (with tractor)		30.7	26.2	37.0
(without tractor)		21.5	17.1	21.9
Expenses per $100 gross income		47.00	39.00	64.00
Machinery cost per acre		1.83	1.96	2.05
Farm improvements cost per acre		1.10	1.05	1.31
Gross receipts per acre		24.54	31.01	18.45
Total expenses per acre		11.57	12.12	11.81
Net receipts per acre		12.97	18.89	6.64
Farms with tractor		61.8 %	72.7 %	54.5 %
Value of land per acre		153	151	150
Total investment per acre		211	207	212

Find Your Farm Leaks

Grundy and Kendall Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse				
											Tractor	No tractor			
13.2	65	68	34	158	345	372	16.00	25.75	2.30	140	44	36	15	45	360
12.2	62	65	32	148	325	352	15.00	23.75	2.80	135	42	34	20	42	340
11.2	59	62	30	138	305	332	14.00	21.75	3.30	130	40	32	25	39	320
10.2	56	59	28	128	285	312	13.00	19.75	3.80	125	38	30	30	36	300
9.2	53	56	26	118	265	292	12.00	17.75	4.30	120	36	28	35	33	280
8.2	50	53	24	108	245	272	11.00	15.75	4.80	115	34	26	40	30	260
7.2	47	50	22	98	225	252	10.00	13.75	5.30	110	32	24	45	27	240
6.2	44	47	20	88	205	232	9.00	11.75	5.80	105	30	22	50	24	220
5.2	41	44	18	78	185	212	8.00	9.75	6.30	100	28	20	55	21	200
4.2	38	41	16	68	165	192	7.00	7.75	6.80	95	26	18	60	18	180
3.2	35	38	14	58	145	172	6.00	5.75	7.30	90	24	16	65	15	160
2.2	32	35	12	48	125	152	5.00	3.75	7.80	85	22	14	70	12	140
1.2	29	32	10	38	105	132	4.00	1.75	8.30	80	20	12	75	9	120
0.2	26	29	8	28	85	112	3.00	--	8.80	75	18	10	80	6	100
-0.8	23	26	6	18	65	92	2.00	--	9.30	70	16	8	85	3	80

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BOONE AND DE KALB COUNTY FARM BUREAUS

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ANNUAL FARM BUSINESS REPORT

on

Forty Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June 1929

M-114

ANNUAL FARM BUSINESS REPORT

Boone and DeKalb Counties, Illinois, 1928

Prepared by R. R. Hudelson, G. B. Byers, and H. C. M. Case*

The 40 farmers in Boone and DeKalb Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.7 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $395, there remains a rate of 4.7 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $988. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $268 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $116 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $188 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Boone and DeKalb County farmer earned about 3.7 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this section since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned

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*E. C. Foley and Ray Nelson, farm advisers in Boone and DeKalb Counties respectively, cooperated in supervising and collecting the records used in this report.

on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,350 larger net incomes than the third which were least successful.

There was a difference of only 4 acres in average size between the 13 most profitable and the 13 least profitable farms. Neither was there any practical difference in percentage of tillable land or in the acreage of the more important crops. Difference in size of farm was therefore not a factor in determining the difference in net income between the two groups.

Crop yields were higher on the more profitable farms with the exception of oats which yielded practically the same on both groups. The difference was not large for any crop except corn. The more profitable farms produced 11 bushels more corn than the less profitable farms. Corn is the most important crop on these farms with an average of about 70 acres per farm and this difference of 11 bushels in yield had an important effect on net incomes. Investigations of cost of producing corn in central Illinois have shown that under present conditions it costs from $28 to $30 an acre to produce an acre of corn. This is the average for a group of farms and a charge is included to cover taxes and 5 percent interest on a conservative valuation of land. The most profitable farms covered by this report produced 47 bushels of corn per acre as compared with 36 bushels on the less profitable farms. Dividing the average cost of $29 an acre by the number of bushels grown we find that corn would cost 62 cents a bushel on the more successful farms and 81 cents on the less successful farms. A difference of 19 cents a bushel figured on the number of bushels produced per farm for the most profitable farms amounts to $602. The higher yield of corn saved this much since they evidently had no higher production costs as indicated by a lower cost per acre for labor, equipment and taxes.

The biggest single factor favoring the more successful farm operators was a higher efficiency in handling and feeding livestock. These operators secured a livestock income of $178 for each $100 worth of feed fed as compared with $131 for the less successful farm operators. The livestock income must cover other costs besides feed including such items as labor, pasture, shelter and interest. It is doubtful, therefore, whether the less successful farms had much if any net income left for their livestock enterprises. It is this margin above cost which counts. These results are verified by the returns per $100 invested in all livestock as well as by the returns per $100 invested in each class of livestock separately. With $4 an acre less investment in livestock the more successful operators had about $3 an acre more income from livestock. The biggest difference was in the dairy enterprise. The 13 most profitable farms had average dairy sales over $1000 a farm higher than the 13 least profitable farms. The less successful farms had more beef cattle and less dairy cattle.

With higher crop yields and more livestock income per acre the more profitable farms still had slightly lower costs per acre for labor. They also had much lower costs per acre for machinery and equipment, these items averaging twice as high on the less profitable farms. This is in spite of the fact that these less successful farms had less dairying and the dairy enterprise is generally considered as requiring more equipment.

The situation is summed up in the figures showing gross income and expense per acre. The 13 most profitable farms had a gross income of $28.34 with an expense of $12.23 an acre as compared with $20.13 income and $15.12 expense on the 13 least profitable farms. This resulted in net acre incomes of $16.11 and $5.01 respectively.

The following table presents a comparison of farm income and investment figures for this area for the last two years. Net incomes were appreciably better for 1928, due chiefly to larger incomes from dairy sales and crops.

Comparative Earnings on Farms in Boone and DeKalb Counties for 1927 and 1928

Item	1927[1]	1928
Number of farms	38	40
Average size of farms, acres	220	210
Average rate earned, percent	4.0	5.7
Average value of land per acre	$ 125	$ 116
Average investment per acre	201	188
Investment in livestock per farm	4903	4141
Investment in cattle per farm	2422	2487
Investment in hogs per farm	1540	929
Investment in poultry per farm	168	182
Gross income per acre	22.71	25.03
Operating cost per acre	14.62	14.28
Net increase from crops per farm	-	487
Miscellaneous income per farm	72	93
Livestock income per farm	4923	4692
Gross income per farm	4995	5272
Cattle income per farm	1569	1371
Dairy sales per farm	1079	1584
Hog income per farm	1831	1236
Poultry income per farm	278	395

[1] A few records from Lee and Ogle Counties were included for 1927.

Boone and DeKalb Counties - 1928

Item	Your farm	Average of 40 farms	13 most profitable farms	13 least profitable farms
Capital Investments - Total	$	$39 574	$35 136	$40 227
Land		24 503	21 683	24 289
Farm improvements		6 870	6 105	7 319
Machinery and equipment		1 887	1 862	1 936
Feed, grain and supplies		2 173	1 843	2 096
Livestock - Total		4 141	3 638	4 587
Horses		411	379	434
Cattle		2 487	2 123	3 076
Hogs		929	838	753
Sheep		131	117	142
Poultry		182	181	180
Bees		1	-	2
Receipts - Net Increases - Total	$	$ 5 272	$ 6 056	$ 4 384
Feed, grain and supplies		487	1 021	---
Labor off the farm		90	170	49
Miscellaneous		3	2	5
Livestock - Total		4 692	4 863	4 330
Horses		---	5	---
Cattle		1 371	991	1 658
Hogs		1 236	1 168	903
Sheep		105	50	146
Poultry		149	135	136
Egg sales		246	246	253
Dairy sales		1 584	2 268	1 233
Bees		1	-	1
Expenses - Net Decreases - Total	$	$ 1 999	$ 1 575	$ 2 282
Farm improvements		320	226	334
Machinery and equipment		502	312	656
Feed, grain and supplies		---	---	16
Dairy expense		27	29	45
Misc. livestock expense		60	50	76
Miscellaneous crop expense		230	204	235
Hired labor		457	397	500
Taxes, insurance, etc.		362	331	378
Miscellaneous expenses		25	26	24
Horses - decreases		16	--	18
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 3 273	$ 4 481	$ 2 102
Total unpaid labor		1 008	1 039	1 010
Operator's labor		702	685	700
Family labor		306	354	310
Net income from investment and management		2 265	3 442	1 092
Rate earned on investment	%	5.72%	9.80%	2.71%
Income left before paying for operator's labor		2 967	4 127	1 792
5 percent of Capital Invested		1 979	1 756	2 011
Labor and management wage	$	$ 988	$ 2 371	$ - 219

Boone and DeKalb Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 40 farms	13 most profitable farms	13 least profitable farms
Size of farm - acres		210.6	213.7	217.8
Percent of land area tillable	%	84.3 %	81.1 %	83.0 %
Acres in Corn		70.4	66.6	71.
Oats		26.1	30.2	24.5
Wheat		4.5	4.2	5.7
Barley		32.4	28.2	34.1
Crop yields - Corn, bu. per acre		44.3	47.6	36.6
Oats, bu. per acre		50.3	49.0	49.6
Wheat, bu. per acre		25.8	25.5	23.0
Barley," per acre		33.3	35.2	30.6
Returns per $100 of feed fed to productive livestock		143	178	131
Returns per $100 invested in all productive livestock		117	140	98
For $100 in Cattle		106	138	86
Hogs		137	140	127
Poultry		211	214	203
Investment in productive livestock per acre		19.04	16.25	20.36
Receipts from productive livestock per acre		22.28	22.73	19.88
Man labor cost per acre		6.96	6.72	6.93
Crop acres per man		78.9	72.5	78.9
Crop acres per horse (with tractor)		32.7	34.8	31.3
(without tractor)		18.4	17.3	21.8
Expenses per $100 gross income		57.00	43.00	75.00
Machinery cost per acre		2.38	1.46	3.01
Farm improvements cost per acre		1.52	1.06	1.53
Gross receipts per acre		25.03	28.34	20.13
Total expenses per acre		14.28	12.23	15.12
Net receipts per acre		10.75	16.11	5.01
Farms with tractor		82.5 %	84.6 %	92.3 %
Value of land per acre		116	101	112
Total investment per acre		188	164	185

Find Your Farm Leaks

Boone and DeKalb Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L. S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
	Corn	Oats	Barley	Cattle	Hogs	Poultry				Man	Horse . . .				
											Tractor	No tractor			
12.7	65	71	54	246	277	351	33	36	3.50	110	46	32	22	46	350
11.7	62	68	51	226	257	331	31	34	4.00	105	44	30	27	43	330
10.7	59	65	48	206	237	311	29	32	4.50	100	42	28	32	40	310
9.7	56	62	45	186	217	291	27	30	5.00	95	40	26	37	37	290
8.7	53	59	42	166	197	271	25	28	5.50	90	38	24	42	34	270
7.7	50	56	39	146	177	251	23	26	6.00	85	36	22	47	31	250
6.7	47	53	36	126	157	231	21	24	6.50	80	34	20	52	28	230
5.7	44	50	33	106	137	211	19	22	7.00	75	32	18	57	25	210
4.7	41	47	30	86	117	191	17	20	7.50	70	30	16	62	22	190
3.7	38	44	27	66	97	171	15	18	8.00	65	28	14	67	19	170
2.7	35	41	24	46	77	151	13	16	8.50	60	26	12	72	16	150
1.7	32	38	21	26	57	131	11	14	9.00	55	24	10	77	13	130
0.7	29	35	18	--	37	111	9	12	9.50	50	22	8	82	10	110
-0.3	26	32	15	--	17	91	7	10	10.00	45	20	6	87	7	90
-1.3	23	29	12	--	--	71	5	8	10.50	40	18	4	92	4	70

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COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

Stephenson County Farm Bureau

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-two Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June, 1929

M-122

ANNUAL FARM BUSINESS REPORT

Stephenson County, Illinois, 1928

Prepared by R. R. Hudelson, G. B. Byers, and H. C. M. Case*

The 32 farmers in Stephenson County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6.9 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $291, there remains a rate of 5.9 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1,267. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $547 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $112 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $191 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 ercent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Stephenson County farmer earned about 4.9 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Stephenson County since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank.

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* W. A. Herrington, farm adviser in Stephenson County, cooperated in supervising and collecting the records used in this report.

These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,299 larger net incomes than the third which were least successful.

The 10 most profitable farms averaged 14 acres larger than the 10 least profitable farms. The latter group had a higher percentage of tillable land, however, so that farms of the two groups had practically the same acreage of possible crop land per farm. Difference in size was not a factor in determining the difference in net income between the two groups.

One of the important advantages of the more successful farm operators was in having a larger acreage and higher yield of corn. There was not much difference in yield of other crops but corn on the 10 most profitable farms produced 20 bushels more per acre. This is especially important since corn is the principal crop on these farms as it is on nearly all farms of central and northern Illinois. Studies of the cost of producing corn in central Illinois over a period of several years have indicated an average cost of $28 to $30 per acre including taxes and a charge of 5 percent interest on a conservative value of the land. There have been considerable variations in cost between individual farms but the average cost for a group of farms has stayed consistently near these figures for several years. Acre costs usually do not increase greatly for higher yields. If we assume an average acre cost of $29 an acre for farms included in this report and divide by the bushels per acre in each case we may see the importance of higher yields in reducing cost per bushel. In this case we would estimate that the more profitable farms with 60 bushels average yield produced corn for about 48 cents a bushel while farms of the less profitable group with an average yield of 40 bushels had a cost of about 72 cents a bushel. This difference of about 24 cents a bushel in cost of corn was a large factor affecting net incomes. Applied to the 2849 bushels produced on the average farm of the more successful group it amounts to $683.

The biggest single factor favoring more successful farm operators was a higher efficiency in handling and feeding livestock. These farms are in the heaviest livestock producing section of the state as shown by the average investment per acre in livestock, amounting to more than $20. The more successful farmers realized $137 of livestock income for each $100 worth of feed fed as compared with $120 income for each $100 worth of feed fed by the less successful farmers. Livestock income must cover other costs besides feed, such as labor, pasture, shelter, and interest. It is evident that the less successful farms had little if any net income above costs from livestock enterprises and it is this margin above costs which counts. These conclusions as to greater livestock efficiency of the more successful farm operators are further substantiated by the returns per $100 invested in all livestock as well as by the returns per $100 invested in cattle, hogs and poultry

separately. With $5.49 more livestock investment per acre the more successful operators realized $13.88 more livestock income per acre.

There was very little difference between the two groups in cost per acre for labor or equipment and only 52 cents an acre difference in total operating cost. The difference in net incomes was due primarily to a larger gross income with no higher costs on the more profitable farms.

The situation is summed up in the figures showing gross income and expense per acre. The 10 most profitable farms had an average gross income of $35.03 with an expense of $15.52 an acre compared with $21.24 income and $15.00 expense on the 10 least profitable farms. This resulted in net incomes of $19.51 and $6.24 an acre respectively for the two groups.

The following table presents an interesting comparison of income and investment figures for the Stephenson county district for the last five years. Farmers of this district buy considerable feed and years of good crop production when smaller quantities of feed must be bought are favorable. Yields were especially good in 1925 and that was the best year for farm earnings since reports of this type have been published. Yield and quality of grain were fairly good in 1928 and it proved the next most profitable year.

Comparative Earnings on Some Farms in Stephenson County

Item	1924[1]	1925[2]	1926[3]	1927[4]	1928[4]
Number of farms included.	51	44	37	30	32
Average size of farms in acres. . .	180	188	182	156	152
Average rate earned, percent. . . .	3.7	7.5	5.6	3.5	6.9
Average value of land per acre. . .	$120	$112	$118	$121	$112
Average investment per acre	157	170	188	195	191
Investment in livestock per farm.	2781	3259	4035	3527	3730
Investment in cattle per farm	1451	1815	2238	1729	2176
Investment in hogs per farm	659	765	1028	1042	829
Investment in poultry per farm. . .	155	141	172	159	194
Gross income per acre	18.05	24.15	24.70	23.82	28.44
Operating costs per acre.	11.49	11.46	14.22	16.99	15.28
Grain sales less feed purchases . .	189	286	--	--	--
Miscellaneous income per farm . . .	65	91	79	57	52
Livestock income per farm	2995	4162	4425	3656	4277
Gross income per farm	3251	4539	4504	3713	4329
Cattle income per farm.	422	715	712	718	879
Dairy sales per farm.	798	957	1156	1288	1422
Hog income per farm	1444	2127	2195	1295	1563
Poultry income per farm	257	309	281	286	358

Some points of strength and some of weakness may be found in your own farm business by comparing the factors from your own record in the following tables with the same factors on the average farm as well as on farms of the high and low profit groups.

[1]Records from JoDaviess, Stephenson and Ogle Counties included for 1924.
[2]Records from JoDaviess, Stephenson and Carroll Counties included for 1925.
[3]Records from JoDaviess and Stephenson Counties included for 1926.
[4]Records from Stephenson County only for 1927 and 1928.

Stephenson County - 1928

Item	Your farm	Average of 32 farms	10 most profitable farms	10 least profitable farms
Capital Investments - Total	$	$29 129	$32 139	$28 029
Land		17 099	19 280	15 966
Farm improvements		5 060	4 487	5 527
Machinery and equipment		1 541	1 873	1 323
Feed, grain and supplies		1 699	2 038	1 541
Livestock - Total		3 730	4 511	3 672
Horses		419	444	441
Cattle		2 176	2 585	2 121
Hogs		829	1 275	705
Sheep		112	27	227
Poultry		194	180	178
Bees		--	--	--
Receipts - Net Increases - Total	$	$ 4 329	$ 5 829	$ 3 288
Farm improvements		--	--	--
Feed, grain and supplies		--	--	--
Labor off the farm		49	62	64
Miscellaneous		3	--	1
Livestock - Total		4 277	5 767	3 163
Horses		--	--	5
Cattle		879	1 278	468
Hogs		1 563	2 569	1 123
Sheep		55	16	49
Poultry		96	134	37
Egg sales		262	271	138
Dairy sales		1 422	1 499	1 343
Bees		--	--	--
Expenses - Net Decreases - Total	$	$ 1 359	$ 1 540	$ 1 288
Farm improvements		198	138	222
Machinery and equipment		329	350	312
Feed, grain and supplies		154	272	127
Dairy expense		4	3	6
Misc. livestock expense		44	63	39
Miscellaneous crop expense		158	171	144
Hired labor		216	253	194
Taxes, insurance, etc.		211	230	213
Miscellaneous expenses		29	30	31
Horses - decreases		16	30	--
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 2 970	$ 4 289	$ 1 940
Total unpaid labor		966	1 042	992
Operator's labor		720	720	720
Family labor		246	322	272
Net income from investment and management		2 004	3 247	948
Rate earned on investment	%	6.88%	10.09%	3.38%
Income left before paying for operator's labor		2 724	3 967	1 668
5 percent of Capital Invested		1 457	1 610	1 402
Labor and management wage	$	$ 1 267	$ 2 357	$ 266

Stephenson County - 1928

Factors helping to analyze the farm business	Your farm	Average of 32 farms	10 most profitable farms	10 least profitable farms
Size of farm - acres		152.2	166.4	152.0
Percent of land area tillable	%	87.3%	82.1%	91.1%
Acres in Corn		38.6	47.8	39.8
Oats		20.0	24.0	23.5
Wheat		1.4	2.0	.4
Barley		16.6	17.2	15.8
Crop yields - Corn, bu. per acre		51.6	59.6	39.9
Oats, bu. per acre		51.9	50.7	52.0
Wheat, bu. per acre		16.7	17.5	14.3
Barley, bu. per acre		34.4	30.5	32.4
Returns per $100 of feed fed to productive livestock		135	137	120
Returns per $100 invested in all productive livestock		125	131	99
For $100 in Cattle		102	101	85
Hogs		172	179	150
Poultry		191	226	106
Investment in productive livestock per acre		22.54	26.39	20.30
Receipts from productive livestock per acre		28.10	34.66	20.78
Man labor cost per acre		7.77	7.78	7.80
Crop acres per man		68.0	67.4	68.7
Crop acres per horse (with tractor)		24.9	26.1	28.1
(without tractor)		18.5	21.0	18.4
Expenses per $100 gross income		54	44	71
Machinery cost per acre		2.16	2.10	2.05
Farm improvements cost per acre		1.30	.83	1.46
Gross receipts per acre		28.44	35.03	21.24
Total expenses per acre		15.28	15.52	15.00
Net receipts per acre		13.16	19.51	6.24
Farms with tractor		53.1%	60.0%	60.0%
Value of land per acre		112	116	105
Total investment per acre		191	193	184

Find Your Farm Leaks

Stephenson County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse. Tractor	Horse. No tractor			
13.9	73	73	31	242	312	331	36.50	42	4.25	105	39	32	20	49	290
12.9	70	70	29	222	292	311	34.50	40	4.75	100	37	30	25	46	270
11.9	67	67	27	202	272	291	32.50	38	5.25	95	35	28	30	43	250
10.9	64	64	25	182	252	271	30.50	36	5.75	90	33	26	35	40	230
9.9	61	61	23	162	232	251	28.50	34	6.25	85	31	24	40	37	210
8.9	58	58	21	142	212	231	26.50	32	6.75	80	29	22	45	34	190
7.9	55	55	19	122	192	211	24.50	30	7.25	75	27	20	50	31	170
6.9	52	52	17	102	172	191	22.50	28	7.75	70	25	18	55	28	150
5.9	49	49	15	82	152	171	20.50	26	8.25	65	23	16	60	25	130
4.9	46	46	13	62	132	151	18.50	24	8.75	60	21	14	65	22	110
3.9	43	43	11	42	112	131	16.50	22	9.25	55	19	12	70	19	90
2.9	40	40	9	22	92	111	14.50	20	9.75	50	17	10	75	16	70
1.9	37	37	7	—	72	91	12.50	18	10.25	45	15	8	80	13	50
0.9	34	34	5	--	52	71	10.50	16	10.75	40	13	6	85	10	30
-0.1	31	31	--	--	32	51	8.50	14	11.25	35	11	4	90	7	10

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

JODAVIESS AND CARROLL COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Fifty-three farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June, 1929

M-123

ANNUAL FARM BUSINESS REPORT

Jo Daviess and Carroll Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 53 farmers in JoDaviess and Carroll Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.6 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $335, there remains a rate of 4.6 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $896. It it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $176 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $105 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $163 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average JoDaviess or Carroll County farmer earned about 3.6 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was a better year for these counties than 1927, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These

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* V. J. Banter and M. P. Roske, farm advisers in JoDaviess and Carroll Counties, respectively, cooperated in supervising and collecting the records used in this report.

industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,067 larger net incomes than the third which were least successful. There was a difference of only two acres in average size between farms of the low and high earnings groups. Neither was there any practical difference in the percentage of tillable land. Difference in size of farm, therefore, was not a factor in determining the difference in net earnings.

One important factor favoring the more profitable farms was that of higher crop yields especially in the case of corn and barley. The 18 most profitable farms produced 8 bushels more corn and 7 bushels more barley per acre. This resulted in a lower cost per bushel of grain produced since costs of production usually do not increase in proportion to yield. It also reduced the amount of feed to be bought thus cutting down operating expenses.

The biggest single factor favoring the more profitable farms was that of greater efficiency in handling and feeding livestock. These farms with only 100 bushels more feed grain produced per farm fed almost as much livestock and still had a net increase from crops of $156 above feed purchases. The least profitable farms spent an average of $1,021 more for feed than their crop increases amounted to. Expressed in another way the 18 most successful farm operators realized a livestock income of $166 for each $100 worth of feed fed as compared with a corresponding income of $118 for each $100 worth of feed fed by the 18 least successful operators. Livestock income must cover other costs besides feed, including such items as labor, pasture, shelter, and interest. It is evident that the least successful farmers had little if any income above these costs and it is the margin above costs which counts in net income. These conclusions as to relative efficiency with livestock are further substantiated by the returns per $100 invested in all livestock as well as by the returns per $100 invested in cattle, hogs, and poultry separately. With 52 cents less investment per acre in livestock the more successful farmers realized $3.82 more livestock income per acre with much less expenditure for purchased feed. These farms are in one of the heavy livestock producing sections of the state as shown by their average investment of over $16 an acre in livestock. Efficiency in handling livestock is therefore one of the most important requirements of success.

There was not much difference between the successful and unsuccessful groups of farms in the costs for labor, equipment and improvements. The higher operating costs of the less successful farmers were due chiefly to expenditures for purchased feed.

The situation is summed up in the figures showing gross income and expense per acre. The 18 most profitable farms produced an average gross income of $25.24

with an expense of $11.35 an acre as compared with $20.62 income and $16.97 expense for the 18 least profitable farms. This resulted in average net incomes of $13.89 and $3.65 an acre respectively for the two groups.

The following table presents an interesting comparison of income and investment figures for farms in the JoDaviess and Carroll County district for the last five years. Allowance must be made for some shifting in territory included for different years. Earnings were clearly better for 1928 than for 1927. Operating expense per acre has varied more from year to year for this area than for most areas in the state due to the variation in amounts of feed purchased. On years of good crop yields much less feed is bought. This has a marked effect on net earnings. There appears to be a tendency toward an increased amount of dairy and poultry production in the area.

Comparative Earnings on Farms in the Area Represented by JoDaviess and Stephenson Counties

Item	1924[1]	1925[2]	1926[3]	1927[4]	1928[4]
Number of farms included.	51	44	37	33	53
Average size of farms in acres. . . .	180	188	182	206	205
Average rate earned, percent.	3.7	7.5	5.6	2.4	5.6
Average value of land per acre. . . .	$120	$112	$118	$112	$105
Average investment per acre	157	170	188	177	163
Investment in livestock per farm. . .	2781	3259	4035	4454	3776
Investment in cattle per farm	1451	1815	2238	2392	2064
Investment in hogs per farm	659	765	1028	1352	1001
Investment in poultry per farm. . . .	155	141	172	167	177
Gross income per acre	18.05	24.15	24.70	21.62	22.03
Operating costs per acre.	11.49	11.46	14.22	17.40	12.86
Grain sales less feed purchases . . .	189	286	--	--	--
Miscellaneous income per farm	65	91	76	91	58
Livestock income per farm	2995	4162	4425	4366	4459
Gross income per farm	3251	4539	4504	4457	4517
Cattle income per farm.	422	715	712	1147	990
Dairy sales per farm.	798	957	1156	1162	1243
Hog income per farm	1444	2127	2195	1746	1757
Poultry income per farm	257	309	281	267	389

Some points of strength and some of weakness may be found in your own business by comparing the factors from your own record in the following tables with the same factors on the average farm as well as on farms of the high and low profit groups.

[1] Records from JoDaviess, Stephenson, and Ogle Counties included 1924

[2] Records from JoDaviess, Stephenson, and Carroll Counties included 1925

[3] Records from JoDaviess, and Stephenson Counties included 1926

[4] Records from JoDaviess and Carroll Counties included 1927 and 1928

Item	Your farm	Average of 53 farms	18 most profitable farms	18 least profitable farms
Capital Investments - Total	$_____	$33 497	$29 682	$35 983
Land		21 402	17 986	23 792
Farm improvements		5 110	4 973	4 888
Machinery and equipment		1 573	1 574	1 522
Feed, grain and supplies		1 636	1 530	1 621
Livestock - total	_____	3 776	3 619	4 160
Horses		449	433	483
Cattle		2 064	2 029	2 236
Hogs		1 001	849	1 259
Sheep		85	91	54
Poultry		177	217	128
Bees		---	---	---
Receipts - Net Increases - Total	$_____	$ 4 517	$ 5 112	$ 4 221
Farm improvements		---	---	---
Feed, grain and supplies		---	156	---
Labor off the farm		48	49	43
Miscellaneous		10	4	5
Livestock - Total	_____	4 459	4 903	4 173
Horses		---	---	---
Cattle		990	863	1 009
Hogs		1 757	1 663	1 958
Sheep		80	83	66
Poultry		145	240	96
Egg sales		244	349	147
Dairy sales		1 243	1 705	897
Bees		---	---	---
Expenses - Net Decreases - Total	$_____	$ 1 647	$ 1 340	$ 2 531
Farm improvements		202	181	241
Machinery and equipment		384	362	413
Feed, grain and supplies		281	---	1 021
Misc. livestock expense		56	62	62
Miscellaneous crop expense		176	157	198
Hired labor		276	328	304
Taxes, insurance, etc.		235	210	264
Miscellaneous expenses		28	32	28
Horses - decreases		9	8	--
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$_____	$ 2 870	$ 3 772	$ 1 690
Total unpaid labor		990	958	943
Operator's labor		691	679	719
Family labor		299	279	224
Net income from investment and management		1 880	2 814	747
Rate earned on investment	_____ %	5.61%	9.48%	2.06%
Income left before paying for operator's labor		2 571	3 493	1 466
5 percent of Capital Invested		1 675	1 484	1 799
Labor and management wage	$_____	$ 896	$ 2 009	$ -333

JoDaviess and Carroll Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 53 farms	18 most profitable farms	18 least profitable farms
Size of farm - acres		205.0	202.5	204.7
Percent of land area tillable		71.6%	69.8%	71.1%
Acres in Corn		47.6	41.2	50.3
Oats		23.0	23.2	24.0
Wheat		2.0	2.7	1.8
Barley		11.5	13.5	11.2
Crop yields - Corn, bu. per acre		47.7	50.0	42.2
Oats, bu. per acre		48.4	46.9	45.8
Wheat, bu. per acre		18.7	16.6	20.3
Barley, bu. per acre		35.9	39.7	32.4
Return per $100 of feed fed to productive livestock		142	166	118
Returns per $100 invested in all productive livestock		133	144	118
For $100 in Cattle		105	118	88
Hogs		181	184	166
Poultry		216	261	190
Investment in productive livestock per acre		16.39	16.79	17.31
Receipts from productive livestock per acre		21.75	24.21	20.39
Man labor cost per acre		6.18	6.35	6.09
Crop acres per man		69.2	65.8	74.1
Crop acres per horse (with tractor)		25.5	22.8	29.0
(without tractor)		21.3	22.9	19.8
Expenses per $100 gross income		58	45	82
Machinery cost per acre		1.87	1.79	2.02
Farm improvements cost per acre		.99	.89	1.18
Gross receipts per acre		22.03	25.24	20.62
Total expenses per acre		12.86	11.35	16.97
Net receipts per acre		9.17	13.89	3.65
Farms with tractor		62.3%	50.0%	61.1%
Value of land per acre		105	89	116
Total investment per acre		163	147	176

Find Your Farm Leaks

JoDaviess and Carroll Counties, 1923

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
	Corn	Oats	Barley	Cattle	Hogs	Poultry				Man	Horse				
											Tractor	No Tractor			
12.6	69	69	57	245	321	356	30.40	35.75	2.70	105	39	35	25	43	340
11.6	66	66	54	225	301	336	28.40	33.75	3.20	100	37	33	30	40	320
10.6	63	63	51	205	281	316	26.40	31.75	3 70	95	35	31	35	37	300
9.6	60	60	48	185	261	296	24.40	29.75	4.20	90	33	29	40	34	280
8.6	57	57	45	165	241	276	22.40	27.75	4.70	85	31	27	45	31	260
7.6	54	54	42	145	221	256	20.40	25.75	5.20	80	29	25	50	28	240
6.6	51	51	39	125	201	236	18.40	23.75	5.70	75	27	23	55	25	220
5.6	48	48	36	105	181	216	16.40	21.75	6.20	70	25	21	60	22	200
4.6	45	45	33	85	161	196	14.40	19.75	6.70	65	23	19	65	19	180
3.6	42	42	30	65	141	176	12.40	17.75	7.20	60	21	17	70	16	160
2.6	39	39	27	45	121	156	10.40	15.75	7.70	55	19	15	75	13	140
1.6	36	36	24	25	101	136	8.40	13.75	8.20	50	17	13	80	10	120
0.6	33	33	21	--	81	116	6.40	11.75	8.70	45	15	11	85	7	100
-0.4	30	30	18	--	61	96	4.40	9.75	9.20	40	13	9	90	4	80
-1.4	27	27	15	--	41	76	2.40	7.75	9.70	35	11	7	95	--	60

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

ROCK ISLAND, OGLE, LEE AND WHITESIDE COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Forty-nine Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June, 1929

M-115

ANNUAL FARM BUSINESS REPORT

Rock Island, Ogle, Lee and Whiteside Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston and H. C. M. Case*

The 49 farmers in the above named counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 4.9 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $388, there remains a rate of 3.9 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $643. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is nothing left as pay for the management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $128 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $189 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these counties earned about 2.9 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this district since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers

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*J. R. Spencer, D. E. Warren, C. E. Yale and L. O. Wise, farm advisers in Rock Island, Ogle, Lee and Whiteside Counties, respectively, cooperated in supervising and collecting the records used in this report.

and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2092 larger net incomes than the third which were least successful.

The 16 most profitable farms averaged about 38 acres smaller than the 16 least profitable farms. This difference in size probably had no influence on the difference in net incomes since similar studies have shown that there is usually little variation in average size between the profitable and unprofitable groups of farms. If the difference in size had any influence it should have been in favor of the larger farms since larger size gives greater opportunity for efficient use of labor, power, equipment and improvements. This is true at least within the limits represented by farms included in this report. It is of interest to note that the less successful farms with more acres did have lower costs per acre for labor and for equipment.

The crop yields on the profitable and unprofitable farms included in this report are unusual in that they were no higher on the more profitable farms. With the exception of oats yields averaged slightly higher on the less profitable farms, a situation very seldom found in studies of this type.

The biggest factor favoring the more profitable farms was their greater efficiency in handling and feeding livestock. This is an area of heavy livestock production and livestock efficiency is so important that these records indicate that the farm operator who is a successful livestock producer may succeed in winning a profit even if he is not outstandingly successful in raising crops. Of course he will be more successful if he is also a producer of high yields of crops since this will give him lower feed costs. All the pertinent figures in this report agree in showing the greater efficiency of the more successful farm operators in livestock production. They had fewer crop acres combined with no higher yields yet they fed more livestock and still had an income from crops amounting to $296 a farm above the amount spent for purchased feeds. The less successful operators bought feed to the amount of $658 a farm more than their crop income. The first group realized a livestock income of $167 for each $100 worth of feed fed in comparison with $117 income from $100 worth of feed on farms of the less successful group. The income from livestock must cover other costs besides feed including such items as labor, pasture, shelter and interest. It is evident that farms of the less profitable group did not realize much if any profit on their livestock enterprises. This is very important to the farm business in an area like this where there is an average livestock investment of over $17 an acre. Of the different livestock enterprises the more successful farms gained their greatest advantage in dairy production. They had $607 a farm more dairy sales than the less successful farms.

Labor and equipment costs were slightly higher per acre on the more profitable farms. A larger amount of livestock including more dairying together with a small average size of farm made this necessary and the larger income per acre more than justified the higher cost.

The situation is summed up in the figures showing gross income and expense per acre. The 16 most profitable farms produced a gross income of $28.47 at an expense of $13.45 an acre as compared with $18.95 income and $15.91 expense for the 16 least profitable farms. This resulted in net incomes of $15.02 and $3.04 an acre respectively for the two groups.

The following table presents a comparison of income and investment figures for this area for the last three years. The average rate earned on the investment has not varied much over the three-year period, altho there has been considerable variation on some individual farms.

Comparative Earnings on Some Farms in Rock Island, Mercer, and Whiteside Counties for 1926, 1927, and 1928

Items	1926[1]	1927[2]	1928
Number of farms included	32	29	49
Average size of farms in acres	194	196	205
Average rate earned, percent	4.7	4.2	4.9
Average value of land per acre	$131	$142	$128
Average investment per acre	196	212	189
Investment in livestock per farm	3917	4546	3766
Investment per cattle per farm	1594	1969	1839
Investment in hogs per farm	1532	1778	1107
Investment in poultry per farm	178	154	153
Gross income per acre	24.96	26.80	22.31
Operating cost per acre	15.66	17.85	13.05
Crop income less feed purchases per farm	-	-	131
Miscellaneous income per acre	41	34	61
Livestock income per farm	4811	5231	4392
Gross income per farm	4852	5265	4584
Cattle income per farm	796	1374	1066
Dairy sales per farm	658	674	944
Hog income per farm	2991	2853	1946
Poultry income per farm	318	271	306

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

[1] Records from Rock Island, Whiteside and Carroll Counties 1926.

[2] Records from Rock Island, Mercer and Whiteside Counties 1927.

Rock Island, Ogle, Lee and Whiteside Counties - 1928

Item	Your farms	Average of 49 farms	16 most profitable farms	16 least profitable farms
Capital Investments - Total	$_____	$38 855	$34 019	$39 598
Land		26 369	22 786	26 291
Farm improvements		5 218	4 403	5 632
Machinery and equipment		1 486	1 510	1 498
Feed, grain and supplies		2 016	1 728	2 097
Livestock - total	_____	3 766	3 592	4 080
Horses		548	521	616
Cattle		1 839	1 863	1 992
Hogs		1 107	926	1 176
Sheep		118	107	166
Poultry		153	172	130
Bees		1	3	---
Receipts - Net Increases-Total	$_____	$ 4 584	$ 5 243	$ 4 208
Farm improvements		---	---	---
Feed, grain and supplies		131	296	---
Labor off the farm		58	135	29
Miscellaneous		3	7	2
Livestock - total	_____	4 392	4 805	4 177
Horses		---	---	5
Cattle		1 066	985	1 066
Hogs		1 946	1 973	2 055
Sheep		130	142	114
Poultry		119	132	88
Egg sales		187	254	137
Dairy sales		944	1 319	712
Bees		---	---	---
Expenses-Net Decreases-Total	$_____	$ 1 656	$ 1 518	$ 2 566
Farm improvements		292	187	408
Machinery and equipment		428	433	453
Feed, grain and supplies		---	---	658
Dairy expense		10	4	10
Misc. livestock expense		62	52	79
Miscellaneous crop expense		190	168	202
Hired labor		296	345	360
Taxes, insurance, etc.		346	289	366
Miscellaneous expenses		29	30	30
Horses - decreases		3	9	--
Miscellaneous livestock decreases Bees		--	1	--
Receipts less expenses	$_____	$ 2 928	$ 3 725	$ 1 642
Total unpaid labor		1 025	959	968
Operator's labor		683	671	686
Family labor		342	288	282
Net income from investment and management		1 903	2 766	674
Rate earned on investment	_____%	4.90%	8.13%	1.78%
Income left before paying for operator's labor		2 586	3 437	1 360
5 percent of Capital Invested		1 943	1 701	1 980
Labor and management wage	$_____	$ 643	$ 1 736	$ - 620

Rock Island, Ogle, Lee, and Whiteside Counties, 1928

Factors helping to analyze the farm business	Your farm	Average of 49 farms	16 most profitable farms	16 least profitable farms
Size of farm - acres	_____	205.5	184.1	222.1
Percent of land area tillable		83.1	80.6	78.6
Acres in Corn		66.0	66.2	62.5
Oats		27.2	18.1	30.8
Wheat		6.3	7.2	4.6
Barley		12.7	12.8	16.1
Crop yields - Corn, bu. per acre	_____	49.8	50.3	51.3
Oats, bu. per acre	_____	44.1	52.3	33.2
Wheat, bu. per acre	_____	19.1	16.4	21.3
Barley, bu. per acre		31.3	29.2	31.3
Return per $100 of feed fed to productive livestock		143	167	117
Returns per $100 invested in all productive livestock		121	137	105
For $100 in Cattle	_____	88	101	71
Hogs	_____	182	221	176
Poultry	_____	199	219	178
Investment in productive livestock per acre	_____	17.71	19.06	17.92
Receipts from productive livestock per acre	_____	21.39	26.09	18.78
Man labor cost per acre	_____	6.43	7.08	5.98
Crop acres per man	_____	80.3	77.2	77.6
Crop acres per horse (with tractor)		24.0	26.1	21.8
(without tractor)		19.4	17.4	19.0
Expenses per $100 gross income	_____	58	47	84
Machinery cost per acre		2.08	2.35	2.04
Farm improvements cost per acre		1.42	1.02	1.84
Gross receipts per acre	_____	22.31	28.47	18.95
Total expenses per acre		13.05	13.45	15.91
Net receipts per acre		9.26	15.02	3.04
Farms with tractor		46.9%	50%	50%
Value of land per acre		128	124	118
Total investment per acre		189	184	178

Find Your Farm Leaks

Rock Island, Ogle, Lee, and Whiteside Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
11.9	71	65	33	158	322	339	31.71	35.39	2.93	115	38	33	23	43.31	345
10.9	68	62	31	148	302	319	29.71	33.39	3.43	110	36	31	28	40.31	325
9.9	65	59	29	138	282	299	27.71	31.39	3.93	105	34	29	33	37.31	305
8.9	62	56	27	128	262	279	25.71	29.39	4.43	100	32	27	38	34.31	285
7.9	59	53	25	118	242	259	23.71	27.39	4.93	95	30	25	43	31.31	265
6.9	56	50	23	108	222	239	21.71	25.39	5.43	90	28	23	48	28.31	245
5.9	53	47	21	98	202	219	19.71	23.39	5.93	85	26	21	53	25.31	225
4.9	50	44	19	88	182	199	17.71	21.39	6.43	80	24	19	58	22.31	205
3.9	47	41	17	78	162	179	15.71	19.39	6.93	75	22	17	63	19.31	185
2.9	44	38	15	68	142	159	13.71	17.39	7.43	70	20	15	68	16.31	165
1.9	41	35	13	58	122	139	11.71	15.39	7.93	65	18	13	73	13.31	145
0.9	38	32	11	48	102	119	9.71	13.39	8.43	60	16	11	78	10.31	125
-0.1	35	29	9	38	82	99	7.71	11.39	8.93	55	14	9	83	7.31	105
-1.1	32	26	7	28	62	79	5.71	9.39	9.43	50	12	7	88	4.31	85
-2.1	29	23	5	18	42	59	3.71	7.39	9.93	45	10	5	93	1.31	65

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

HENRY COUNTY FARM BUREAU

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Sixty Farms

for

1928

The farm account is a guide to more profitable farm management if its facts are studied and used.

Urbana, Illinois

April 1929

M-104

ANNUAL FARM BUSINESS REPORT

Henry County, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The sixty farmers in Henry County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $446, there remains a rate of 4 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $719. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is nothing left as pay for the risk and management in operating the business.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by the representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rate earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Henry County farmer earned about 3 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Henry County since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent. These industries pay for management in the form of salaries to managers and officers.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $160 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $227 an acre.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

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*H. K. Danforth, farm adviser in Henry County, cooperated in supervising and collecting the records used in this report.

Every farm manager can gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,571 larger net incomes than the third which were least successful.

The farms of the more successful group averaged about 20 acres larger than those of the lower income group. This probably gave them a slight advantage in securing volume of business and efficiency in the use of equipment. This is usually not an important factor in determining the rate earned. There was little difference in value of land or in percentage of tillable land.

The largest differences in income between the two groups seem to be due to larger yields of corn, more efficient feeding and more successful handling of the cattle enterprise.

The more profitable farms produced an average of eight bushels more corn per acre which with their extra acreage gave them 1,282 bushels more corn. Yields on other crops were very close together for the two groups of farms. Both groups averaged about 18 brood sows per farm as shown by their inventories, and they averaged about the same amount of hog sales. The more successful farm operators averaged over twice as much income from cattle as the less successful group. This was mostly from beef cattle, altho they also had larger average dairy sales. The extra income from beef cattle was mostly from feeder cattle. The more successful farms averaged nearly 6 beef cows and 5.5 dairy cows per farm, while the lower income farms averaged 3.5 beef cows and 5 dairy cows.

More efficient feeding on the more profitable farms is indicated by the fact that they realized $135 income from each $100 worth of feed fed while the less profitable farms secured only $110 income from each $100 worth of feed.

The two groups of farms had about the same investment per acre in livestock but the more successful farm operators realized about $5 an acre more livestock income. Most of this was from cattle and dairy products, altho part was from poultry.

There was little difference in labor efficiency on the two groups of farms as indicated by the labor cost per acre and the crop acres per man. It should be noted, however, that with about the same labor cost the more successful operators secured larger corn yields and greater efficiency in feeding. Equipment costs were somewhat higher on the less profitable farms.

The situation is summed up in the gross income and expense per acre. The more successful farm operators secured a gross income of $30.14 with an expense of $13.11 an acre while their less successful neighbors secured a gross income of $20.60 with an expense of $15.45 an acre. This leaves the former group an average net income per acre of $17.03 as compared with $5.15 for the latter group.

The table below gives an interesting comparison of income and investment figures on the account-keeping farms in Henry County for the period from 1925 to 1928 inclusive. The rate earned on the investment for 1928 was just about an average for the four years and slightly higher than for 1927. Comparing 1928 with 1927 the income per acre was slightly higher and the expense per acre slightly lower. The income from cattle was less but the income from dairy products a little higher. The income from hogs was higher as was that from poultry. None of these differences were very large, however.

Comparative Earnings on Henry County Farms

Item	1925	1926	1927	1928
Number of farm accounts	45	59	60	60
Average size of farm, acres	202	199	205	197
Average rate earned, percent	7.1	4.3	4.3	5.0
Average value of land per acre	$ 172	$ 169	$ 163	$ 160
Average investment per acre	238	239	231	227
Investment in livestock per farm	3957	4388	4653	4097
Investment in cattle per farm	1653	1917	2142	1935
Investment in hogs per farm	1542	1744	1731	1448
Investment in poultry per farm	161	164	164	166
Gross income per acre	30.39	24.80	23.76	24.80
Operating cost per acre	13.52	14.54	13.69	13.39
Income from crops per farm	787	68	745	369
Miscellaneous income per farm	114	55	56	40
Livestock income per farm	5253	4810	4083	4466
Gross income per farm	6154	4933	4884	4375
Cattle income per farm	1265	1178	1479	1302
Hog income per farm	3260	2894	1886	2263
Poultry income per farm	291	275	286	349
Dairy sales per farm	373	427	402	512

Some points of strength and some of weakness in your own farm business may be found by comparing the factors from your own account with those for the average farm as well as with the factors for the more profitable farms and the less profitable farms.

Henry County - 1928

Item	Your farm	Average of 60 farms	Twenty most profitable farms	Twenty least profitable farms
Capital Investments - Total	$_____	$44 637	$45 371	$43 526
Land	_____	31 424	31 404	31 149
Farm improvements	_____	4 736	5 231	4 094
Machinery and equipment	_____	1 806	1 832	1 794
Feed, grain and supplies	_____	2 574	2 627	2 660
Livestock - Total	_____	4 097	4 227	3 829
Horses	_____	499	511	470
Cattle	_____	1 935	2 253	1 646
Hogs	_____	1 448	1 237	1 489
Sheep	_____	38	12	39
Poultry	_____	166	210	155
Bees	_____	11	4	30
Receipts - Net Increases - Total	$_____	$ 4 875	$ 6 239	$ 3 818
Farm improvements	_____	---	---	---
Feed, grain and supplies	_____	369	903	---
Labor off the farm	_____	31	58	20
Miscellaneous	_____	9	2	22
Livestock - Total	_____	4 466	5 276	3 776
Horses	_____	---	---	---
Cattle	_____	1 302	1 895	910
Hogs	_____	2 263	2 195	2 120
Sheep	_____	40	8	39
Poultry	_____	165	192	172
Egg sales	_____	184	288	133
Dairy sales	_____	512	697	402
Bees	_____	---	1	---
Expenses - Net Decreases - Total	$_____	$ 1 687	$ 1 626	$ 1 986
Farm improvements	_____	195	180	165
Machinery and equipment	_____	399	393	433
Feed, grain and supplies	_____	---	---	331
Misc. livestock expense	_____	56	56	50
Miscellaneous crop expense	_____	185	185	187
Hired labor	_____	460	411	444
Taxes, insurance, etc.	_____	349	353	327
Miscellaneous expenses	_____	24	22	26
Horses - decreases	_____	18	26	20
Bees	_____	1	--	3
Miscellaneous livestock decreases _____	_____	-	-	-
Receipts less expenses	$_____	$ 3 188	$ 4 613	$ 1 832
Total unpaid labor	_____	945	1 088	878
Operator's labor	_____	708	717	720
Family labor	_____	237	371	158
Net income from investment and management	_____	2 243	3 525	954
Rate earned on investment	_____ %	5.02%	7.77%	2.19%
Income left before paying for operator's labor	_____	2 950	4 242	1 674
5 percent of Capital Invested	_____	2 231	2 269	2 177
Labor and management wage	$_____	$ 719	$ 1 973	$ - 503

Henry County - 1928

Factors helping to analyze the farm business	Your farm	Average of 60 farms	Twenty most profitable farms	Twenty least profitable farms
Size of farm - acres	_____	197	207	185
Percent of land area tillable	_____	88 %	89 %	92 %
Acres in Corn	_____	72	79	66
Oats	_____	27	28	28
Wheat	_____	6	6	7
Barley	_____	12	11	13
Crop yields - Corn, bu. per acre	_____	55	58	50
Oats, bu. per acre	_____	46	46	45
Wheat, bu. per acre	_____	24	22	21
Barley, bu. per acre	_____	30	30	29
Return per $100 of feed fed to productive livestock	_____	131	154	106
Returns per $100 invested in all productive livestock	_____	121	135	110
For $100 in Cattle	_____	88	109	75
Hogs	_____	159	172	147
Poultry	_____	205	224	191
Investment in productive livestock per acre	_____	18.84	18.81	18.52
Receipts from productive livestock per acre	_____	22.71	25.49	20.36
Man labor cost per acre	_____	7.15	7.24	7.13
Crop acres per man	_____	77	77	80
Crop acres per horse (with tractor)	_____	26	26	26
(without tractor)	_____	18	17	18
Expenses per $100 gross income	_____	54	44	75
Machinery cost per acre	_____	2.03	1.90	2.34
Farm improvements cost per acre	_____	.99	.87	.89
Gross receipts per acre	_____	24.80	30.14	20.60
Total expenses per acre	_____	13.39	13.11	15.45
Net receipts per acre	_____	11.41	17.03	5.15
Percent of farms with tractor	_____	60 %	40 %	65 %
Value of land per acre	_____	160	152	168
Total investment per acre	_____	227	219	235

Find Your Farm Leaks

Henry County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L. S.	Receipts per acre from L.S.	Man labor cost per acre	Man	Crop acres per Horse		Expense per $100 income	Gross receipts per acre	Size of farm
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12.0	76	67	38	158	299	345	32.84	36.71	3.65	110	40	32	20	46	340
11.0	73	64	36	148	279	325	30.84	34.71	4.15	105	38	30	25	43	320
10.0	70	61	34	138	259	305	28.84	32.71	4.65	100	36	28	30	40	300
9.0	67	58	32	128	239	285	26.84	30.71	5.15	95	34	26	35	37	280
8.0	64	55	30	118	219	265	24.84	28.71	5.65	90	32	24	40	34	260
7.0	61	52	28	108	199	245	22.84	26.71	6.15	85	30	22	45	31	240
6.0	58	49	26	98	179	225	20.84	24.71	6.65	80	28	20	50	28	220
5.0	55	46	24	88	159	205	18.84	22.71	7.15	75	26	18	55	25	200
4.0	52	43	22	78	139	185	16.84	20.71	7.65	70	24	16	60	22	180
3.0	49	40	20	68	119	165	14.84	18.71	8.15	65	22	14	65	19	160
2.0	46	37	18	58	99	145	12.84	16.71	8.65	60	20	12	70	16	140
1.0	43	34	16	48	79	125	10.84	14.71	9.15	55	18	10	75	13	120
-1.0	40	31	14	38	59	105	8.84	12.71	9.65	50	16	8	80	10	100
-2.0	37	28	12	28	39	85	6.84	10.71	10.15	45	14	6	85	7	80
-3.0	34	25	10	18	19	65	4.84	8.71	10.65	40	12	4	90	4	60

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Cooperating

ANNUAL FARM BUSINESS REPORT

on

Forty-three Farms

for
1928

The farm account is a guide to
more profitable farm management
if its facts are studied and
used.

Urbana, Illinois

May, 1929

M-109

ANNUAL FARM BUSINESS REPORT

Stark, Peoria, and Bureau Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 34 farmers in Stark, Peoria and Bureau counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.5 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $439, there remains a rate of 4.5 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $924. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $204 left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $162 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $224 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rate earned on farms included in this farm accounting project averages about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these three counties earned about 3.5 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this section since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of

*E. E. Brown, J. W. Whisenand, and W. W. Wilson, farm advisers in Stark, Peoria, and Bureau counties respectively cooperating in supervising and collecting the records used in this report.

industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent, as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. Of course, in other industries just as in farming no records are available to cover the average of all companies. Reporting companies probably are above the average.

Every farm manager can gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,915 larger net incomes than the third which were least successful.

The 14 most profitable farms averaged forty acres larger than the 14 least profitable farms. This difference in size gave them some advantage in the efficient use of improvements and equipment. As a rule, however, investigations similar to this have indicated that difference in size is not one of the most important factors behind difference in net income. Of the extra 40 acres on the more profitable farms 14 acres were in corn, 13 in oats, and 5 in wheat, and the remaining 8 acres were in miscellaneous crops and pasture. The two groups had about the same percentage of tillable land.

There was less difference in crop yields between the two groups than is usually found in investigations of this type. The 14 most profitable farms did average 4 bushels more corn and 7 bushels more wheat per acre. This was important since any advantage in yield adds directly to the net income since operating costs per acre do not vary much with difference in yield.

The biggest advantage of the 14 most successful farm operators was in their greater efficiency with livestock. For every $100 worth of feed fed they secured $158 of livestock income while the 14 least successful operators had a corresponding income of only $111. This $111 income from $100 worth of feed is not enough to cover the costs for labor, pasture, shelter, interest and other items necessary to livestock in addition to feed. The 14 most profitable farms also show larger returns for each $100 invested in cattle, in hogs, and in poultry. The two groups of farms had about the same livestock investment per acre but the 14 most profitable farms secured $4.42 an acre more livestock income. Livestock efficiency is a major factor in determining income on farms in this area where the livestock investment averages around $15 an acre.

The 14 most successful farm operators with about the same amount of livestock per acre had lower costs per acre for labor, equipment and improvements. Part of this advantage was due to larger size of farm but probably a part was due also to more efficient planning and organization of the farm business.

The big advantage of the more successful farm operators was not so much in lower costs per acre but in larger income per acre and per animal. They had a gross income per acre of $28.86 as compared with $19.51 an acre on the

14 least profitable farms. The expense per acre amounted to $11.06 and $14.66 respectively. This left net receipts of $17.80 an acre for the most profitable farms and only $4.85 for the least profitable farms. The more profitable farms had larger gross incomes all along the line from crops, cattle, hogs, and dairy sales.

The following table gives an interesting comparison of farm earnings for the last 3 years for the farms on which accounts were kept in the area covered by this report. Allowance must be made for some shifting in territory included from year to year. Peoria county was included for 1928 which brought in more farms with a dairy enterprise. With the exception of a small difference in dairy figures these tables correspond closely with those of surrounding counties in showing that 1928 was a better year for farm earnings in this section than any other year since 1925.

Comparative income and investment figures on some farms in the Stark, Peoria, Bureau County area

Item	1926[1]	1927[2]	1928
Number of farms included	41	46	43
Average size of farm in acres	195	207	196
Average rate earned	4.4%	3.7%	5.5%
Average value of land per acre	$195	$180	$162
Average investment per acre	258	244	224
Investment in livestock per farm	3,285	4,114	3,498
Investment in cattle per farm	1,112	1,296	1,418
Investment in hogs per farm	1,333	1,712	1,248
Investment in poultry per farm	116	128	128
Gross income per acre	24.32	22.08	25.38
Operating cost per acre	13.03	13.10	12.98
Crop income less feed purchases per farm	1,018	1,071	1,026
Miscellaneous income per farm	48	46	136
Livestock income per farm	3,686	3,446	3,814
Cattle income per farm	622	1,108	777
Dairy income per farm	206	267	686
Hog income per farm	2,599	1,826	1,985
Poultry income per farm	192	167	288
Gross income per farm	4,752	4,563	4,976

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

[1] Records from Marshall-Putnam and Stark counties only for 1926.

[2] Records from Marshall-Putnam, Stark and Bureau counties 1927.

Stark, Peoria, Bureau Counties - 1929

Item	Your farm	Average of 43 farms	14 most profitable farms	14 least profitable farms
Capital Investments - Total	$	$43 923	$44 234	$39 516
Land		31 815	32 668	28 159
Farm improvements		4 909	4 182	5 263
Machinery and equipment		1 613	1 630	1 535
Feed, grain and supplies		2 088	2 241	1 543
Livestock - Total		3 498	3 513	3 016
Horses		554	525	540
Cattle		1 418	1 404	1 181
Hogs		1 248	1 219	1 052
Sheep and Goats		147	249	64
Poultry		128	116	175
Bees		3	---	4
Receipts - Net Increases - Total	$	$ 4 976	$ 6 062	$ 3 316
Feed, grain and supplies		1 026	1 747	561
Labor off the farm		125	120	126
Miscellaneous		11	23	2
Livestock - Total		3 814	4 172	2 627
Horses		---	---	---
Cattle		777	1 111	452
Hogs		1 985	1 941	1 280
Sheep		73	30	98
Poultry		139	168	142
Egg sales		149	142	186
Dairy sales		686	780	468
Bees		5	--	1
Expenses - Net Decreases - Total	$	$ 1 672	$ 1 418	$ 1 617
Farm improvements		227	158	294
Machinery and equipment		352	280	397
Feed, grain and supplies		---	---	---
Misc. livestock expense		63	51	45
Miscellaneous crop expense		206	156	158
Hired labor		453	394	400
Taxes, insurance, etc.		336	353	286
Miscellaneous expenses		22	21	21
Horses - decreases		13	5	16
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 3 304	$ 4 644	$ 1 699
Total unpaid labor		873	905	875
Operator's labor		689	694	660
Family labor		184	211	215
Net income from investment and management		2 431	3 739	824
Rate earned on investment	%	5.53%	8.45%	2.08%
Income left before paying for operator's labor		3 120	4 433	1 484
5 percent of Capital Invested		2 196	2 212	1 976
Labor and management wage	$	$ 924	$ 2 221	$ - 492

Stark, Peoria, Bureau Counties - 1929

Factors helping to analyze the farm business	Your farm	Average of 43 farms	14 most profitable farms	14 least profitable farms
Size of farm - acres		196	210	170
Percent of land area tillable		83%	82%	80%
Acres in Corn		70	75	61
Oats		27	33	20
Wheat		6	9	4
Barley		10	9	8
Crop yields - Corn, bu. per acre		53	54	50
Oats, bu. per acre		46	44	46
Wheat, bu. per acre		19	20	13
Barley, bu. per acre		32	30	31
Return per $100 of feed fed to productive livestock		132	158	111
Returns per $100 invested in all productive livestock		121	139	105
For $100 in Cattle		94	128	72
Hogs		154	153	148
Poultry		215	246	194
Investment in productive livestock per acre		16.05	14.29	14.74
Receipts from productive livestock per acre		19.46	19.87	15.45
Man labor cost per acre		6.76	6.18	7.50
Crop acres per man		78.2	82.5	73.7
Crop acres per horse (with tractor)		23.9	24.6	23.4
(without tractor)		19.7	16.9	19.1
Expenses per $100 gross income		51.	38.	75.
Machinery cost per acre		1.80	1.33	2.34
Farm improvements cost per acre		1.16	.75	1.73
Gross receipts per acre		25.38	28.86	19.51
Total expenses per acre		12.98	11.06	14.66
Net receipts per acre		12.40	17.80	4.85
Percent of farms with tractor		72%	86%	86%
Value of land per acre		162	156	166
Total investment per acre		224	211	232

Find Your Farm Leaks

Stark, Peoria, Bureau counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
										Man	Horse				
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12.5	74	67	33	164	294	355	30	34	3.25	115	38	34	15	46	340
11.5	71	64	31	154	274	335	28	32	3.75	110	36	32	20	43	320
10.5	68	61	29	144	254	315	26	30	4.25	105	34	30	25	40	300
9.5	65	58	27	134	234	295	24	28	4.75	100	32	28	30	37	280
8.5	62	55	25	124	214	275	22	26	5.25	95	30	26	35	34	260
7.5	59	52	23	114	194	255	20	24	5.75	90	28	24	40	31	240
6.5	56	49	21	104	174	235	18	22	6.25	85	26	22	45	28	220
5.5	53	46	19	94	154	215	16	20	6.75	80	24	20	50	25	200
4.5	50	43	17	84	134	195	14	18	7.25	75	22	18	55	22	180
3.5	47	40	15	74	114	175	12	16	7.75	70	20	16	60	19	160
2.5	44	37	13	64	94	155	10	14	8.25	65	18	14	65	16	140
1.5	41	34	11	54	74	135	8	12	8.75	60	16	12	70	13	120
0.5	38	31	9	44	54	115	6	10	9.25	55	14	10	75	10	100
-0.5	35	28	7	34	34	95	4	8	9.75	50	12	8	80	7	80
-1.5	32	25	5	24	14	75	2	6	10.25	45	10	6	85	4	60

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Knox, Mercer and Warren Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston and H. C. M. Case*

The 30 farmers in Knox, Mercer and Warren Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.9 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $482, there remains a rate of 4.9 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1151. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $431 left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know sometning of the valuation on which the investment is computed. The average value of the land included in this report was placed at $164 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $232 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rate earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these counties earned about 3.9 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this section of the state since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available covering the average of all companies. Companies reporting probably are above the average.

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*A. R. Kemp, J. E. Harris and A. A. Olsen, farm advisers in Knox, Mercer and Warren Counties respectively, cooperated in supervising and collecting the records used in this report.

Every farm manager can gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers have succeeded better than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1,967 larger net incomes than the third which were least successful.

The 10 most profitable farms averaged 46 acres smaller than the 10 least profitable farms. This is unusual, especially for farms following a general type of farming such as prevails in these counties. The records seem to indicate that two or three large farms included in the least profitable group are not taking full advantage of their larger size in the way of securing lower labor and equipment costs. It was these two or three farms which raised the average size of farm in the least profitable group.

There was little difference in crop yields between the two groups of farms. This also is unusual as studies of this kind usually show a considerable advantage in yield on the more profitable farms. In this case both groups had about the same percentage of tillable land and there was little difference in the average value of land per acre. This indicates that there was little difference in the quality of land.

The biggest single advantage of the 10 most successful farm operators was due to their greater efficiency in handling and feeding livestock. For every $100 worth of feed fed they realized $169 of income from livestock, while the 10 least successful operators only realized $113 for each $100 worth of feed. Both the cattle and hog enterprises shared in this greater livestock efficiency and these two enterprises contributed over three-fourths of the gross income on the farms included in this report. With an investment of over $20 an acre in livestock and with a high degree of efficiency in handling and feeding livestock, the 10 most successful operators had a very great advantage toward a larger net return. This was enough to overcome any lack of advantage in crop yields and size of farm.

In spite of their smaller size the 10 most successful farm operators had lower average costs per acre for labor, equipment, and improvements. As suggested above this appears to be due to the failure of some of the larger farms in the low income group to take advantage of their size in organizing for more efficient use of these factors of cost.

The situation on these farms is summed up in the gross income and expense per acre. The 10 most profitable farms had average gross incomes of $33.94 and expenses of $12.64 an acre. This corresponds to a gross income of $24.70 and an expense of $16.56 an acre on the 10 least profitable farms. The more successful farm operators, therefore, gained both in larger income and lower expense per acre. They realized net incomes of $21.30 an acre compared with $8.14 on the less profitable farms.

The following table gives an interesting comparison of income and investment figures for farms in the Knox and Warren County district for the last three years. It is evident that farm earnings were better for 1928 than for the two preceding years. Some allowances must be made for the fact that there has been some shift in territory included for different years, but records for Knox and Warren Counties were included each year and all territory included is in the same type of farming district.

Comparative Earnings on Farms in the Knox, Mercer, Warren County District

Item	1926[1]	1927[2]	1928
Number of farms	32	34	30
Average size of farms, acres	251	246	208
Average rate earned, percent	3.7	3.2	5.9
Average value of land per acre	$138	$152	$164
Average investment per acre	196	208	232
Investment in livestock per farm	4740	4061	3953
Investment in cattle per farm	2223	1398	1496
Investment in hogs per farm	1625	1689	1587
Investment in poultry per farm	117	146	164
Gross income per acre	20.66	18.71	28.10
Operating cost per acre	13.39	12.08	14.41
Net increase from crops per farm	--	670	723
Miscellaneous income per farm	77	68	70
Livestock income per farm	5122	3870	5053
Gross income per farm	5199	4608	5846
Cattle income per farm	1507	1032	1149
Dairy sales per farm	284	399	574
Hog income per farm	3028	2033	2894
Poultry income per farm	203	265	316

[1] Records from Knox, Warren, and Henderson Counties, 1926

[2] Records from Knox, Warren, and Fulton Counties, 1927

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the most profits and the group making the least profits.

Knox, Mercer, Warren Counties - 1928

Item	Your farm	Average of 30 farms	Ten most profitable farms	Ten least profitable farms
Capital Investment - Total ---	$_____	$48 223	$41 160	$54 498
Land----------		34 134	29 945	37 143
Farm improvements----------		5 261	4 241	6 968
Machinery and equipment-----		1 904	1 326	2 319
Feed, grain and supplies----		2 971	2 196	3 620
Livestock - Total----------		3 953	3 452	4 448
Horses----------		615	431	839
Cattle----------		1 496	1 459	1 442
Hogs----------		1 587	1 401	2 001
Sheep----------		89	22	23
Poultry----------		164	132	143
Bees----------		2	7	---
Receipts - Net Increases-Total	$_____	$ 5 846	$ 6 041	$ 5 533
Feed, grain and supplies----		723	785	539
Labor off the farm----------		65	92	29
Miscellaneous----------		5	---	11
Livestock - Total----------		5 053	5 164	4 954
Horses----------		---	---	---
Cattle----------		1 149	1 432	1 010
Hogs----------		2 894	2 647	2 953
Sheep----------		120	113	19
Poultry----------		142	96	170
Egg sales----------		174	130	160
Dairy sales----------		574	746	642
Bees----------		---	---	---
Expenses-Net Decreases-Total--	$_____	$ 2 107	$ 1 434	$ 2 737
Farm improvements----------		245	172	287
Machinery and equipment-----		574	353	877
Feed, grain and supplies----		---	---	---
Misc. livestock expense-----		97	61	142
Miscellaneous crop expense--		218	191	212
Hired labor----------		532	358	729
Taxes, insurance, etc.------		382	257	426
Miscellaneous expenses------		27	19	39
Horses - decreases----------		31	20	25
Bees----------		1	3	---
Miscellaneous livestock decreases_____		---	---	---
Receipts less expenses--------	$_____	$ 3 739	$ 4 607	$ 2 796
Total unpaid labor----------		891	816	972
Operator's labor----------		714	720	702
Family labor----------		177	96	270
Net income from investment and management-		2 848	3 791	1 824
Rate earned on investment ----	_____%	5.91%	9.21%	3.35%
Income left before paying for operator's labor-		3 562	4 511	2 526
5 percent of Capital Invested		2 411	2 058	2 725
Labor and management wage	$_____	1 151	2 453	- 199

Knox, Mercer, Warren Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 30 farms	Ten most profitable farms	Ten least profitable farms
Size of farm - acres		208	178	224
Percent of land area tillable		85%	88%	86%
Acres in Corn		80	69	96
Oats		22	21	19
Wheat		9	16	5
Barley		17	10	22
Crop yields - Corn, bu. per acre		56	52	60
Oats, bu. per acre		48	43	43
Wheat, bu. per acre		22	24	21
Barley, bu. per acre		30	28	33
Returns per $100 of feed fed to productive livestock		135	169	113
Returns per $100 invested in all productive livestock		137	140	126
For $100 in Cattle		97	107	93
Hogs		180	194	149
Poultry		195	187	211
Investment in productive livestock per acre		17.76	20.71	17.59
Receipts from productive livestock per acre		24.25	29.04	22.16
Man labor cost per acre		6.84	6.60	7.59
Crop acres per man		87	91	81
Crop acres per horse (with tractor)		28	28	29
(without tractor)		18	20	18
Expenses per $100 gross income		51	37	67
Machinery cost per acre		2.76	1.98	3.92
Farm improvements cost per acre		1.18	.97	1.28
Gross receipts per acre		28.10	33.94	24.70
Total expenses per acre		14.41	12.64	16.56
Net receipts per acre		13.69	21.30	8.14
Percent of farms with tractor		73%	80%	70%
Value of land per acre		164	168	166
Total investment per acre		232	231	244

Find Your Farm Leaks

Knox, Mercer and Warren Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man labor cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12.9	77	69	36	167	320	335	32	38	3.35	120	42	32	15	49	340
11.9	74	66	34	157	300	315	30	36	3.85	115	40	30	20	46	320
10.9	71	63	32	147	280	295	28	34	4.35	110	38	28	25	43	300
9.9	68	60	30	137	260	275	26	32	4.85	105	36	26	30	40	280
8.9	65	57	28	127	240	255	24	30	5.35	100	34	24	35	37	260
7.9	62	54	26	117	220	235	22	28	5.85	95	32	22	40	34	240
6.9	59	51	24	107	200	215	20	26	6.35	90	30	20	45	31	220
5.9	56	48	22	97	180	195	18	24	6.85	85	28	18	50	28	200
4.9	53	45	20	87	160	175	16	22	7.35	80	26	16	55	25	180
3.9	50	42	18	77	140	155	14	20	7.85	75	24	14	60	22	160
2.9	47	39	16	67	120	135	12	18	8.35	70	22	12	65	19	140
1.9	44	36	14	57	100	115	10	16	8.85	65	20	10	70	16	120
0.9	41	33	12	47	80	95	8	14	9.35	60	18	8	75	13	100
-0.1	38	30	10	37	60	75	6	12	9.85	55	16	6	80	10	80
-1.1	35	27	8	27	40	55	4	10	10.35	50	14	4	85	7	60

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ANNUAL FARM BUSINESS REPORT

on

Thirty Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June, 1929

M-134

ANNUAL FARM BUSINESS REPORT

Henderson County, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 30 farmers in Henderson County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6.9 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $445, there remains a rate of 5.9 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1,592. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $872 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $132 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $179 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Henderson County farmer earned about 4.9 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Henderson County since reports of this type have been made, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a na-

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*E. D. Walker, farm adviser in Henderson County, cooperated in supervising and collecting the records used in this report.

tionally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $3,848 larger net incomes than the third which were least successful.

The most profitable 10 farms averaged 54 acres larger than the least profitable 10 farms. They had a higher percentage of untillable land, however, so that there was a difference of only about 6 acres in the possible crop land per farm for the two groups. Difference in size of farm probably had little influence on the difference in net earnings.

In most studies of this type higher crop yields are found to be one of the chief advantages of the more profitable farms. In this case, however, there was little difference in yields between the two groups. One group averaged slightly higher in yields of corn and barley and the other in oats and wheat.

The biggest single advantage of the more successful farm operators was that of higher efficiency in handling and feeding livestock and in having more livestock. With $6.04 more investment in livestock per acre these men realized $11.27 an acre more livestock income than the less successful operators. Measured in another way the more profitable farms produced a livestock income of $158 for each $100 worth of feed fed as compared with a corresponding income of $121 for each $100 worth of feed fed on the less profitable farms. The hog enterprise produced nearly half of the gross income on the average farm included in this report and higher efficiency in hog production and marketing was the biggest factor in the relative success of the most successful farmers.

The most profitable 10 farms altho carrying more livestock per acre had slightly lower acre costs for labor and for equipment. They had a little advantage in larger size when operating cost per acre is considered, but this usually would not equal the greater cost of carrying more livestock. Taken all together, operating costs were about 74 cents an acre higher on the less profitable farms. The difference in income was much larger.

The situation is summed up in the figures showing gross income and expense per acre. The most profitable 10 farms had an average gross income of $27.24 with an expense of $10.17 an acre as compared with $16.97 income and $10.91 expense for the least profitable 10 farms. This resulted in average net incomes of $17.07 and $6.06 an acre respectively for the two groups.

The following table presents an interesting comparison of income and investment figures for some Henderson County farms for the last three years. The season

of 1928 was clearly the most favorable for farm earnings. Crop yields were better and corn was of better quality. Larger average incomes were realized from hogs, crops, dairy sales, and poultry sales while operating expenses were slightly lower.

Comparative Earnings on Some Henderson County Farms

Item	1926[1]	1927	1928
Number of farms included	32	30	30
Average size of farms in acres	252	245	250
Average rate earned on investment	3.7%	4.1%	6.9%
Average value of land per acre	$ 138	$ 134	$ 132
Average investment per acre	196	187	179
Investment in livestock per farm	4,740	4,491	3,718
Investment in cattle per farm	2,223	2,068	1,693
Investment in hogs per farm	1,625	1,532	1,189
Investment in poultry per farm	117	105	128
Gross income per acre	20.66	19.51	23.34
Operating cost per acre	13.39	11.85	10.92
Crop income less feed purchases per farm	--	822	921
Miscellaneous income per farm	77	33	50
Livestock income per farm	5,122	3,935	4,854
Gross income per farm	5,199	4,790	5,825
Cattle income per farm	1,507	1,655	1,685
Dairy sales per farm	284	214	313
Hog income per farm	3,028	1,828	2,537
Poultry income per farm	203	155	220

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

[1]Records from Henderson, Knox and Warren Counties included for 1926.

Item	Your farm	Average of 30 farms	10 most profitable farms	10 least profitable farms
Capital Investments - Total	$	$44 564	$54 591	$48 061
Land		32 890	40 255	36 023
Farm improvements		4 176	4 315	5 217
Machinery and equipment		1 437	1 623	1 605
Feed, grain and supplies		2 343	3 108	2 091
Livestock - Total		3 718	5 290	3 125
Horses		629	842	494
Cattle		1 693	2 700	1 234
Hogs		1 189	1 593	1 137
Sheep		79	32	120
Poultry		128	123	140
Bees		---	---	---
Rabbits		---	---	---
Receipts - Net Increases - Total	$	$ 5 825	$ 8 710	$ 4 506
Feed, grain and supplies		921	1 427	1 374
Labor off the farm		47	36	78
Miscellaneous		3	1	4
Livestock - Total		4 854	7 246	3 050
Horses		18	--	27
Cattle		1 685	3 121	851
Hogs		2 537	3 604	1 436
Sheep		81	40	57
Poultry		96	123	88
Egg sales		124	88	173
Dairy sales		313	270	418
Bees		---	---	---
Rabbits		---	---	---
Expenses - Net Decreases - Total	$	$ 1 798	$ 2 403	$ 1 812
Farm improvements		173	226	174
Machinery and equipment		427	516	485
Feed, grain and supplies		---	---	---
Misc. livestock expense		55	88	43
Miscellaneous crop expense		181	221	190
Hired labor		511	826	405
Taxes, insurance, etc.		417	477	478
Miscellaneous expenses		34	32	37
Horses - decreases		--	17	---
Miscellaneous livestock decreases		---	---	---
Receipts less expenses	$	$ 4 027	$ 6 307	$ 2 694
Total unpaid labor		927	850	1 085
Operator's labor		720	720	720
Family labor		207	130	365
Net income from investment and management		3 100	5 457	1 609
Rate earned on investment	%	6.96%	10.00%	3.35%
Income left before paying for operator's labor		3 820	6 177	2 329
5 percent of Capital Invested		2 228	2 729	2 403
Labor and management wage	$	1 592	3 448	- 74

Henderson County - 1928

Factors helping to analyze the farm business	Your farm	Average of 30 farms	10 most profitable farms	10 least profitable farms
Size of farm - acres		249.6	319.7	265.5
Percent of land area tillable	%	79.1	70.6	82.7
Acres in Corn		81.5	107.2	68.1
Oats		30.9	44.4	30.0
Wheat		14.5	14.2	28.4
Barley		12.8	49.0	20.9
Crop yields - Corn, bu. per acre		51.4	49.9	52.7
Oats, bu. per acre		48.2	50.5	48.0
Wheat, bu. per acre		19.7	21.0	19.3
Barley, bu. per acre		28.4	24.7	29.3
Returns per $100 of feed fed to productive livestock		139	158	121
Returns per $100 invested in all productive livestock		142	148	123
For $100 in Cattle		100	109	109
Hogs		212	224	137
Poultry		174	162	201
Investment in productive livestock per acre		13.61	15.29	9.25
Receipts from productive livestock per acre		19.37	22.66	11.39
Man labor cost per acre		5.76	5.24	5.61
Crop acres per man		86.0	94.8	80.5
Crop acres per horse (with tractor)		30.7	29.1	32.9
(without tractor)		18.5	20.5	17.5
Expenses per $100 gross income		47	37	62
Machinery cost per acre		1.71	1.61	1.83
Farm improvements cost per acre		.69	.71	.66
Gross receipts per acre		23.34	27.24	16.97
Total expenses per acre		10.92	10.17	10.91
Net receipts per acre		12.42	17.07	6.06
Farms with tractor		60.0%	60.0%	70.0%
Value of land per acre		132	126	136
Total investment per acre		179	171	181

Find Your Farm Leaks

Henderson County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse				
											Tractor	No tractor			
13.9	72	69	34	170	352	314	27.61	33.37	2.25	120	44	32	12	44	390
12.9	69	66	32	160	332	294	25.61	31.37	2.75	115	42	30	17	41	370
11.9	66	63	30	150	312	274	23.61	29.37	3.25	110	40	28	22	38	350
10.9	63	60	28	140	292	254	21.61	27.37	3.75	105	38	26	27	35	330
9.9	60	57	26	130	272	234	19.61	25.37	4.25	100	36	24	32	32	310
8.9	57	54	24	120	252	214	17.61	23.37	4.75	95	34	22	37	29	290
7.9	54	51	22	110	232	194	15.61	21.37	5.25	90	32	20	42	26	270
6.9	51	48	20	100	212	174	13.61	19.37	5.75	85	30	18	47	23	250
5.9	48	45	18	90	192	154	11.61	17.37	6.25	80	28	16	52	20	230
4.9	45	42	16	80	172	134	9.61	15.37	6.75	75	26	14	57	17	210
3.9	42	39	14	70	152	114	7.61	13.37	7.25	70	24	12	62	14	190
2.9	39	36	12	60	132	94	5.61	11.37	7.75	65	22	10	67	11	170
1.9	36	33	10	50	112	74	3.61	9.37	8.25	60	20	8	72	8	150
0.9	33	30	8	40	92	54	1.61	7.37	8.75	55	18	6	77	5	130
-0.1	30	27	6	30	72	34	----	5.37	9.25	50	16	4	82	-	110

96

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and

HANCOCK COUNTY FARM BUREAU

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-three farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June, 1929

M-131

ANNUAL FARM BUSINESS REPORT

Hancock County, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 33 farmers in Hancock County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.6 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $429, there remains a rate of 4.6 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $965. If it is assumed that the labor performed by the operator is worth $60 a month o4 $720 a year, there is $245 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $143 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $192 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Hancock County farmer earned about 3.6 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Hancock County since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

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* J. H. Lloyd, farm adviser in Hancock County, cooperated in supervising and collecting the records used in this report.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2343 larger net incomes than the third which were least successful.

There was a difference of only 15 acres in average size of farm between the most profitable 10 farms and the least profitable 10 farms. The more profitable farms altho 15 acres smaller had a higher percentage of tillable land which gave them about 10 acres more possible crop land per farm than the less profitable farms. It is evident that difference in size of farm was not an important factor in determine the difference in net income.

As a rule in reports of this kind one of the important factors favoring the more profitable farms is that of higher crop yields. In this case however the difference in crop yields was small when we compare the two groups altho individual farms varied widely.

The biggest factor favoring the more successful farm operators in this case was that of more efficient feeding and management of livestock. Seventy percent of the incomes of the farms covered by this report is derived from livestock enterprises, 40 percent being from hog production. Efficiency with livestock, especially with hogs is therefore a very important factor in determining net incomes. The more successful farmers secured $130 of income for each $100 worth of feed fed to livestock as compared with $119 for each $100 worth of feed fed by the less successful farmers. Livestock income must cover other costs besides feed such as labor, pasture, shelter and interest. The less successful farms evidently realized little profit above these costs. As a further evidence of more efficient feeding the more successful farm operators with very little more acreage in crops and with about the same yields fed as much or more livestock and still derived $2144 income from crops as compared with $781 crop income on the less successful farms. The evidence of higher efficiency on the more profitable farms is also substantiated by the figures showing returns per $100 invested in all productive livestock as well as by the returns for cattle, hogs and poultry separately. Since hog production constitutes the largest single source of income on these farms it is significant that the more successful producers realized a return of $258 for each $100 invested in hogs as compared with a corresponding return of $154 for the less successful producers.

On the expense side of the account the more successful farmers show slightly slightly higher costs per acre for labor and for improvements with slightly lowered costs for machinery and equipment. Taken all together there was a difference of only 14 cents an acre in total operating costs between the two groups. The difference in gross income was much more important.

The situation is summed up in the figures showing gross income and expense per acre. The most profitable 10 farms produced a gross income of $29.35 with an expense of $12.23 an acre as compared with $17.50 income and $12.09 expense for the least profitable 10 farms. This resulted in net incomes of $17.12 and $5.41 an acre respectively for the two groups.

The following table presents an interesting comparison of income and investment figures for accounting farms in Hancock and adjoining counties for the least five years. It is evident that farm incomes in this locality were better for 1928 than for either of the two preceding years. Better yields of corn and oats with much better quality in the corn crop were important factors in the improved situation. Improved weather rather than an improved price level deserves most of the credit.

Comparative Earnings on Farms in Hancock and Adjoining Counties

Item	1924[1]	1925[2]	1926[3]	1927[4]	1928[4]
Number of farm records	51	38	32	31	33
Average size of farm in acres	202	215	236	218	223
Average rate earned	5.3%	6.0%	3.4%	1.8%	5.6%
Average value of land per acre	$ 165	$ 136	$ 137	$ 143	$ 143
Average investment per acre	216	188	190	195	192
Investment in livestock per farm	2765	3245	3859	3579	3258
Investment in cattle per farm	957	1078	1528	1147	1342
Investment in hogs per farm	1034	1364	1483	1560	1080
Investment in poultry per farm	143	134	149	157	144
Gross income per acre	23.66	23.31	19.91	16.55	22.30
Operating cost per acre	12.14	12.01	13.42	12.97	11.46
Grain income less feed purchases per farm	1342	---	---	---	1440
Miscellaneous income per farm	123	72	112	44	49
Livestock income per farm	3319	4952	4599	3558	3485
Gross income per farm	4784	5024	4711	3602	4974
Cattle income per farm	693	927	958	750	697
Dairy sales per farm	170	229	210	269	486
Hog income per farm	2139	3433	3078	2176	2009
Poultry income per farm	238	284	261	277	236

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

[1] Records from Hancock, Adams and McDonough Counties.

[2] Records from Hancock, Adams, Brown, Schuyler and Pike Counties.

[3] Records from Hancock and Adams Counties.

[4] Records from Hancock County.

Hancock County - 1928

Item	Your farm	Average of 33 farms	11 most profitable farms	11 least profitable farms
Capital Investments - Total	$	$42 914	$40 079	$45 224
Land		31 944	29 720	32 611
Farm improvements		4 524	3 932	5 276
Machinery and equipment		1 490	1 412	1 825
Feed, grain and supplies		1 698	1 992	1 601
Livestock - Total		3 258	3 023	3 911
Horses		536	493	618
Cattle		1 342	1 003	1 754
Hogs		1 080	1 028	1 306
Sheep		152	364	71
Poultry		144	123	162
Bees		4	12	---
Receipts - Net Increases - Total	$	$ 4 974	$ 6 076	$ 3 885
Feed, grain and supplies		1 440	2 144	781
Labor off the farm		37	58	35
Miscellaneous		12	27	10
Livestock - Total		3 485	3 847	3 059
Horses		---	---	42
Cattle		697	811	396
Hogs		2 009	2 274	1 779
Sheep		55	138	11
Poultry		87	104	55
Egg sales		149	121	168
Dairy sales		486	394	608
Bees		2	5	---
Expenses - Net Decreases - Total	$	$ 1 702	$ 1 586	$ 1 944
Farm improvements		223	257	249
Machinery and equipment		422	381	477
Feed, grain and supplies		---	---	---
Misc. livestock expense		46	45	56
Miscellaneous crop expense		241	198	285
Hired labor		431	363	543
Taxes, insurance, etc.		313	305	304
Miscellaneous expenses		26	23	30
Horses - decreases		--	14	--
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 3 272	$ 4 490	$ 1 941
Total unpaid labor		854	946	740
Operator's labor		692	700	680
Family labor		162	246	60
Net income from investment and management		2 418	3 544	1 201
Rate earned on investment	%	5.63%	8.84%	2.66%
Income left before paying for operator's labor		3 110	4 244	1 881
5 percent of Capital Invested		2 145	2 004	2 261
Labor and management wage	$	$ 965	$ 2 240	$ - 380

Hancock County - 1928

Factors helping to analyze the farm business	Your farm	Average of 33 farms	11 most profitable farms	11 least profitable farms
Size of farm - acres		223.0	207.0	222.0
Percent of land area tillable		83.0%	91.8%	81.5%
Acres in Corn		73.0	77.0	64.0
Oats		31.0	35.0	27.0
Wheat		18.0	15.0	17.0
Barley		5.0	6.0	5.0
Soybeans		17.0	22.0	16.0
Crop yields - Corn, bu. per acre		48.1	52.8	47.8
Oats, bu. per acre		50.2	50.2	52.7
Wheat, bu. per acre		18.4	18.4	21.6
Barley, bu. per acre		28.3	27.2	29.5
Soybeans, bu. per acre		22.2	24.8	22.1
Return per $100 of feed fed to productive livestock		133	130	119
Returns per $100 invested in all productive livestock		132	149	100
For $100 in Cattle		85	98	58
Hogs		205	258	154
Poultry		174	184	155
Investment in productive livestock per acre		11.82	12.46	13.81
Receipts from productive livestock per acre		15.62	18.58	13.78
Man labor cost per acre		5.76	6.32	5.78
Crop acres per man		90.7	94.7	81.1
Crop acres per horse (with tractor)		32.5	33.7	27.1
(without tractor)		17.3	17.2	16.5
Expenses per $100 gross income		51.00	42.00	69.00
Machinery cost per acre		1.89	1.84	2.15
Farm improvements cost per acre		1.00	1.24	1.12
Gross receipts per acre		22.30	29.35	17.50
Total expenses per acre		11.46	12.23	12.09
Net receipts per acre		10.84	17.12	5.41
Farms with tractor		75.8%	81.8%	81.8%
Value of land per acre		143	144	147
Total investment per acre		192	194	204

Find Your Farm Leaks

Hancock County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse Tractor	Horse No tractor			
12.6	69	71	32	155	345	314	26	29	2.25	125	46	31	16	43	360
11.6	66	68	30	145	325	294	24	27	2.75	120	44	29	21	40	340
10.6	63	65	28	135	305	274	22	25	3.25	115	42	27	26	37	320
9.6	60	62	26	125	285	254	20	23	3.75	110	40	25	31	34	300
8.6	57	59	24	115	265	234	18	21	4.25	105	38	23	36	31	280
7.6	54	56	22	105	245	214	16	19	4.75	100	36	21	41	28	260
6.6	51	53	20	95	225	194	14	17	5.25	95	34	19	46	25	240
5.6	48	50	18	85	205	174	12	15	5.75	90	32	17	51	22	220
4.6	45	47	16	75	185	154	10	13	6.25	85	30	15	56	19	200
3.6	42	44	14	65	165	134	8	11	6.75	80	28	13	61	16	180
2.6	39	41	12	55	145	114	6	9	7.25	75	26	11	66	13	160
1.6	36	38	10	45	125	94	4	7	7.75	70	24	9	71	10	140
0.6	33	35	8	35	105	74	-	5	8.25	65	22	7	76	7	120
-0.4	30	32	6	25	85	54	-	3	8.75	60	20	5	81	4	100
-1.4	27	29	4	15	65	34	-	-	9.25	55	18	3	86	-	80

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

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Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 31 farmers in McDonough County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $429, there remains a rate of 4 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $739. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $19 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $157 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $210 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average McDonough County farmer earned about 3 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for McDonough County since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank.

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These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,469 larger net incomes than the third which were least successful.

There was a difference of only 15 acres in average size of farm between the most profitable 10 farms and the least profitable 10 farms. Difference in size of farm was therefore not an important factor behind the difference in net incomes. Altho the more profitable farms were slightly smaller in size and had only a slightly higher percentage of tillable land they did have more acres of corn, oats, and wheat. They had an average of 20 acres of bluegrass and timothy pasture per farm as compared with an average of 43 acres on the less profitable farms.

One of the most important factors favoring the more profitable farms was that of higher crop yields. They produced 7.6 bushels more corn, 4.4 bushels more oats, and 15.3 bushels more wheat per acre than the less profitable farms. Figured on their entire acreage the more profitable farms had an average of 2,225 bushels more grain than the less profitable farms. In part, at least, this explains the fact that the latter farms bought $339 more feed than they sold crops while the former group had $2,183 crop income above the amount spent for feed.

Another important factor which favored the more successful farm operators was that of higher efficiency in handling and feeding livestock. The more successful farmers realized a livestock income of $131 for each $100 worth of feed fed while the less successful ones had a corresponding income of only $95 for each $100 worth of feed fed. Livestock income must cover other costs besides feed including such items as labor, pasture, shelter, and interest. It is evident that the less successful farmers made little or no profit on their livestock enterprises. These conclusions as to relative efficiency are further substantiated by the figures showing returns per $100 invested in all livestock and those showing returns per $100 invested in cattle.

On the expense side of the account the more profitable farms show about the same labor cost per acre but they show less machinery cost and more improvement cost per acre. The feed bill increased the expense on the less profitable farms so that taken all together they had $2.48 an acre more operating cost than the more profitable farms. The big difference was in income and not in expense, however.

The situation is summed up in the figures showing gross income and expense per acre. The most profitable 10 farms had average gross income of $30.40 with an expense of $13.62 an acre as compared with $19.92 income and $16.10 expense on the least profitable 10 farms. This resulted in net incomes of $16.78 and $3.82 an acre respectively for the two groups.

The following table presents a comparison of income and investment figures on McDonough County farms included in this accounting project for the last 5 years. Earnings for 1928 show some improvement over the two preceding years. This seems to be due chiefly to a better yield of better quality corn. Hogs continued low in price. Cattle continued high but while cattle feeders generally realized a profit on feeding done during the first half of 1928 they mostly failed to profit on cattle bought in the fall of 1928 to feed during the fall and winter of 1928 and 1929. The better quality of the 1928 corn produced better gains on both hogs and cattle and where sold brought better prices altho there was not much change in the price for corn of equal grade between 1927 and 1928.

Comparative Earnings on Some McDonough County Farms

Item	1924[1]	1925	1926	1927	1928
Number of farms included	51	30	26	28	31
Average size of farm in acres	202	180	180	181	205
Average rate earned, percent	5.3	5.7	3.8	1.6	5.0
Average value of land per acre	$165	$179	$176	$163	$157
Average investment per acre	216	238	236	220	210
Investment in livestock per farm	2765	2858	3118	3247	2947
Investment in cattle per farm	957	760	957	939	889
Investment in hogs per farm	1034	1266	1287	1535	1318
Investment in poultry per farm	143	134	155	180	183
Gross income per acre	23.66	28.91	23.24	17.48	24.05
Operating cost per acre	12.14	15.16	14.23	13.91	13.48
Crop income less feed purchases per farm	1342	908	495	148	808
Miscellaneous income per farm	123	130	61	54	81
Livestock income per farm	3319	4166	3641	2968	4042
Gross income per farm	4784	5204	4197	3170	4931
Cattle income per farm	693	456	488	468	523
Dairy sales per farm	170	330	291	325	353
Hog income per farm	2139	3040	2493	1795	2702
Poultry income per farm	238	266	325	346	434

Some points of strength and some of weakness in your own business may be found by comparing the factors from your own record in the following tables with the same factors for the average farm as well as for farms of the high and low profit groups.

[1]Records for Adams and Hancock Counties were included for 1924

McDonough County - 1928

Item	Your farm	Average of 31 farms	10 most profitable farms	10 least profitable farms
Capital Investments - Total	$	42 948	$37 005	$47 754
Land		32 180	27 460	36 307
Farm improvements		3 964	4.052	3 887
Machinery and equipment		1 509	1 180	1 700
Feed, grain and supplies		2 348	1 990	2 720
Livestock - total		2 947	2 323	3 140
Horses		521	510	648
Cattle		869	528	803
Hogs		1 318	1 077	1 497
Sheep		32	23	29
Poultry		183	185	163
Bees		4	--	--
Receipts - Net Increases - Total	$	4 931	$ 5 928	$ 4 183
Farm improvements		--	--	--
Feed, grain and supplies		808	2 183	--
Labor off the farm		71	93	24
Miscellaneous		10	6	25
Livestock - Total		4 042	3 646	4 134
Horses		--	--	--
Cattle		523	391	526
Hogs		2 702	2 474	2 822
Sheep		30	23	26
Poultry		233	287	236
Egg sales		201	227	175
Dairy sales		353	244	349
Bees		--	--	--
Expenses - Net Decreases - Total	$	1 840	$ 1 797	$ 2 443
Farm improvements		218	247	196
Machinery and equipment		439	343	615
Feed, grain and supplies		--	--	339
Misc. livestock expense		60	87	60
Miscellaneous crop expense		257	311	288
Hired labor		493	447	526
Taxes, insurance, etc.		330	315	373
Miscellaneous expenses		26	32	24
Horses - decreases		15	15	22
Miscellaneous livestock decreases Bees		2	--	--
Receipts less expenses	$	3 091	$ 4 131	$ 1 740
Total unpaid labor		925	859	937
Operator's labor		720	720	720
Family labor		205	139	217
Net income from investment and management		2 166	3 272	803
Rate earned on investment	%	5.04%	8.84%	1.68%
Income left before paying for operator's labor		2 886	3 992	1 523
5 percent of Capital Invested		2 147	1 850	2 387
Labor and management wage	$	739	2 142	- 864

McDonough County - 1928

Factors helping to analyze the farm business	Your farm	Average of 31 farms	10 most profitable farms	10 least profitable farms
Size of farm - acres		205.9	195.0	210.0
Percent of land area tillable		85.9	89.2	84.8
Acres in Corn		76.2	84.2	70.8
Oats		23.5	26.8	21.7
Wheat		26.2	29.2	20.9
Crop yields - Corn, bu. per acre		50.4	53.1	45.5
Oats, bu. per acre		51.1	56.2	51.8
Wheat, bu. per acre		27.2	32.9	17.6
Return per $100 of feed fed to productive livestock		117	131	95
Returns per $100 invested in all productive livestock		157	173	159
For $100 in Cattle		89	107	95
Hogs		198	191	190
Poultry		235	256	258
Investment in productive livestock per acre		12.55	10.84	12.40
Receipts from productive livestock per acre		19.72	18.70	19.69
Man labor cost per acre		6.92	6.70	6.97
Crop acres per man		81.2	85.6	81.1
Crop acres per horse (with tractor)		34.6	36.0	28.1
(without tractor)		14.1	17.0	14.4
Expenses per $100 gross income		56	45	81
Machinery cost per acre		2.14	1.76	2.93
Farm improvements cost per acre		1.06	1.27	.93
Gross receipts per acre		24.05	30.40	19.92
Total expenses per acre		13.48	13.62	16.10
Net receipts per acre		10.57	16.78	3.82
Farms with tractor		67.7%	60.0%	70.0%
Value of land per acre		157	141	173
Total investment per acre		210	190	227

McDonough County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per Man	Crop acres per Horse		Expense per $100 income	Gross receipts per A.	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12	71	72	41	160	340	375	26.50	33.75	3.50	115	49	28	21	45	340
11	68	69	39	150	320	355	24.50	31.75	4.00	110	47	26	26	42	320
10	65	66	37	140	300	335	22.50	29.75	4.50	105	45	24	31	39	300
9	62	63	35	130	280	315	20.50	27.75	5.00	100	43	22	36	36	280
8	59	60	33	120	260	295	18.50	25.75	5.50	95	41	20	41	33	260
7	56	57	31	110	240	275	16.50	23.75	6.00	90	39	18	46	30	240
6	53	54	29	100	220	255	14.50	21.75	6.50	85	37	16	51	27	220
5	50	51	27	90	200	235	12.50	19.75	7.00	80	35	14	56	24	200
4	47	48	25	80	180	215	10.50	17.75	7.50	75	33	12	61	21	180
3	44	45	23	70	160	195	8.50	15.75	8.00	70	31	10	66	18	160
2	41	42	21	60	140	175	6.50	13.75	8.50	65	29	8	71	15	140
1	38	39	19	50	120	155	4.50	11.75	9.00	60	27	6	76	12	120
0	35	36	17	40	100	135	2.50	9.75	9.50	55	25	4	81	9	100
-1	32	33	15	30	80	115	--	7.75	10.00	50	23	--	86	6	80
-2	29	30	13	20	60	95	--	5.75	10.50	45	21	--	91	3	60

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

ADAMS COUNTY FARM BUREAU

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Twenty-eight Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May, 1929

M-125

ANNUAL FARM BUSINESS REPORT

Adams County, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 28 farmers in Adams County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.9 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $300, there remains a rate of 4.9 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $970. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $250 left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $115 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $163 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms included in this farm accounting project in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Adams County farmer earned about 3.9 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Adams County since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for

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* S. F. Russell, farm adviser in Adams County, cooperated in supervising and collecting the records used in this report.

1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $3111 larger net incomes than the third which were least successful.

The 10 most profitable farms averaged 44 acres larger than the 10 least profitable farms. This gave the first group some advantage in using labor, equipment, power and improvements efficiently but within the limits represented here difference in size of farm is not a very important factor and probably had little effect on the difference in rate earned on the investment. Other studies similar to this have usually shown little difference in size between the more and the less profitable groups of farms.

Difference in crop yields was one of the most important factors favoring the more profitable farms. They produced 8 bushels more corn, 5 bushels more oats and 10 bushels more wheat per acre than the less profitable farms. Since it usually costs little more to produce an acre of high yielding crop than an acre of low yielding crop, this extra yield applies directly in increasing the net income. Figured on their entire acreage the 10 most profitable farms had 1637 bushels more grain per farm than the 10 least profitable farms.

The biggest single advantage of the more successful farm operators was due to their greater efficiency in handling and feeding livestock. They had slightly less livestock investment per acre but they secured almost twice as much livestock income as the less successful operators. On these farms where over 90 percent of the income is from livestock enterprises efficiency in their management and feeding is one of the greatest factors affecting farm incomes. Greater efficiency with livestock on the more profitable farms is shown in the returns per $100 worth of feed fed, in the returns per $100 invested in livestock and in the returns per $100 invested in each separate class of livestock. Hog production is the largest livestock enterprise on these farms and the more successful farmers secured twice as much income from a given investment in hogs as did the less successful farmers.

The 10 most profitable farms had lower costs per acre for labor as well as for machinery and equipment. At the same time these farms produced larger crop yields and larger yields from livestock enterprises, which indicates that they were not handicapped for lack of labor and equipment. Larger size helped some but it is evident that some of the advantage in use of labor and equipment was due to better organization and operation on the more successful farms.

The situation is summed up in the figures showing gross income and expense per acre. The 10 most profitable farms took in $30.10 an acre with an expense of $13.11. The corresponding figures for the 10 least profitable farms are $16.10 income and $14.65 expense. This left net incomes of $16.99 and $1.45 an acre respectively for the two groups. One group earned 10 percent on their investments, the other less than 1 percent. Expressed in another way the more successful farmers could pay 5 percent on their invested capital and have enough income left to pay themselves a wage of $2377 a year or nearly $200 a month while the less successful farmers lacked $271 of being able to pay 5 percent interest on their capital without having anything left to pay for their labor and management.

Adams County - 1928

Item	Your farm	Average of 28 farms	10 most profitable farms	10 least profitable farms
Capital Investment - Total	$	$30 035	$33 085	$24 020
Land		21 116	23 388	15 750
Farm improvements		3 605	3 614	3 574
Machinery and equipment		1 359	1 210	1 586
Feed, grain and supplies		1 297	1 738	813
Livestock - Total		2 658	3 135	2 297
Horses		436	537	260
Cattle		1 206	1 370	1 103
Hogs		767	995	761
Sheep		97	84	74
Poultry		148	149	89
Bees		4	---	10
Receipts - Net Increases - Total	$	$ 4 153	$ 5 905	$ 2 456
Feed, grain and supplies		277	198	---
Labor off the farm		96	77	130
Miscellaneous		8	--	19
Livestock - Total		3 772	5 630	2 307
Horses		34	105	---
Cattle		790	1 219	382
Hogs		1 869	3 076	1 222
Sheep		103	84	75
Poultry		141	158	67
Egg sales		182	215	82
Dairy sales		653	773	479
Bees		---	---	---
Expenses - Net Decreases - Total	$	$ 1 471	$ 1 701	$ 1 395
Farm improvements		227	225	177
Machinery and equipment		318	314	367
Feed, grain and supplies		---	---	101
Misc. livestock expense		54	85	36
Miscellaneous crop expense		243	306	116
Hired labor		349	462	352
Taxes, insurance, etc.		253	285	204
Miscellaneous expenses		27	24	30
Horses - decreases		--	--	12
Bees		--	--	--
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 2 682	$ 4 204	$ 1 061
Total unpaid labor		914	871	839
Operator's labor		704	698	708
Family labor		210	173	131
Net income from investment and management		1 768	3 333	222
Rate earned on investment	%	5.89%	10.07%	.93%
Income left before paying for operator's labor		2 472	4 031	930
5 percent of Capital Invested		1 502	1 654	1 201
Labor and management wage	$	$ 970	$ 2 377	$ -271

Adams County - 1928

Factors helping to analyze the farm business	Your farm	Average of 28 farms	10 most profitable farms	10 least profitable farms
Size of farm - acres		184.3	196.2	152.5
Percent of land area tillable		84.2	88.5	83.4
Acres in Corn		47.9	51.6	43.5
Oats		25.0	27.3	17.2
Wheat		11.5	18.2	4.8
Crop yields - Corn, bu. per acre		42.3	45.7	37.3
Oats, bu. per acre		40.1	44.5	39.5
Wheat, bu. per acre		19.9	23.7	13.6
Return per $100 of feed fed to productive livestock		153	160	138
Returns per $100 invested in all productive livestock		168	228	108
For $100 in Cattle		120	160	75
Hogs		244	322	152
Poultry		224	260	159
Investment in productive livestock per acre		12.05	12.36	13.98
Receipts from productive livestock per acre		20.28	28.16	15.13
Man labor cost per acre		6.85	6.79	7.81
Crop acres per man		71.0	71.3	63.5
Crop acres per horse (with tractor)		25.2	26.4	25.4
(without tractor)		16.7	12.9	19.7
Expenses per $100 gross income		57	44	91
Machinery cost per acre		1.73	1.60	2.41
Farm improvements cost per acre		1.23	1.15	1.16
Gross receipts per acre		22.53	30.10	16.10
Total expenses per acre		12.94	13.11	14.65
Net receipts per acre		9.59	16.99	1.45
Farms with tractor		57.1%	60 %	60%
Value of land per acre		115	119	103
Total investment per acre		163	169	158

Find Your Farm Leaks

Adams County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per A.	Receipts per A.	Man lab. cost per A.	Crop acres per			Expense per $100	Gross receipts	Size of
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry	in L.S.	from L.S.	A.		Tractor	No tractor	income	per A.	farm
12.9	63	61	34	190	384	364	26	34	3.35	105	39	31	22	43	320
11.9	60	58	32	180	364	344	24	32	3.85	100	37	29	27	40	300
10.9	57	55	30	170	344	324	22	30	4.35	95	35	27	32	37	280
9.9	54	52	28	160	324	304	20	28	4.85	90	33	25	37	34	260
8.9	51	49	26	150	304	284	18	26	5.35	85	31	23	42	31	240
7.9	48	46	24	140	284	264	16	24	5.85	80	29	21	47	28	220
6.9	45	43	22	130	264	244	14	22	6.35	75	27	19	52	25	200
5.9	42	40	20	120	244	224	12	20	6.85	70	25	17	57	22	180
4.9	39	37	18	110	224	204	10	18	7.35	65	23	15	62	19	160
3.9	36	34	16	100	204	184	8	16	7.85	60	21	13	67	16	140
2.9	33	31	14	90	184	164	6	14	8.35	55	19	11	72	13	120
1.9	30	28	12	80	164	144	4	12	8.85	50	17	9	77	10	100
0.9	27	25	10	60	144	124	2	10	9.35	45	15	7	82	7	80
-0.1	24	22	8	50	124	104	--	8	9.95	40	13	5	87	4	60
-1.1	21	19	6	40	104	84	--	6	10.35	35	11	3	92	--	40

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

Fulton and Schuyler County Farm Bureaus

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Forty-one Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June, 1929

M-118

ANNUAL FARM BUSINESS REPORT

Fulton and Schuyler Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 41 farmers in Fulton and Schuyler Counties who kept financial records in the Illinois Farm Account project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6.2 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $398, there remains a rate of 5.2 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1,172. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $452 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $125 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $167 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Fulton or Schuyler County farmer earned about 4.2 percent on his investment for 1928 to pay for use of capital, risk, and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this section of the state since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally

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*J. E. Watt and L. E. McKinzie, farm advisers in Fulton and Schuyler Counties respectively cooperated in supervising and collecting the records used in this report.

known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in incomes between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,671 larger net incomes than the third which were least successful.

The 14 most profitable farms averaged 20 acres smaller than the 14 least profitable farms. This difference in size was probably not a factor in determining the difference in rate earned on the investment. Other investigations similar to this one usually have shown very little difference in average size between the profitable and unprofitable groups of farms. If there was any advantage it should have been in favor of the larger farms since larger size, within these limits, should give opportunities for greater efficiency in use of labor and equipment.

One of the most important factors favoring the more profitable farms was their higher crop yields. The 14 most profitable farms produced an average of about 8 bushels more corn, 4 bushels more oats and 5 bushels more wheat per acre than the 14 least profitable farms. Figuring the yield and acreage for each group of farms it is found that the average farm in the more successful group had 1087 bushels more grain than the average farm of the less successful group.

Another very important factor was that of higher efficiency in handling and feeding livestock on the more successful farms. On these farms there was a livestock income of $161 for each $100 worth of feed fed as compared with $125 for each $100 worth of feed fed by the less successful farmers. The livestock income must cover other costs besides feed, including such items as labor, pasture, shelter, and interest. It is evident that the less successful farm operators had little profit left from their livestock enterprises. These conclusions are further substantiated by the returns per $100 invested in all livestock as well as the returns per $100 invested in cattle and hogs separately. With less than $2 an acre more investment in livestock the more successful farm operators secured $6.54 more livestock income per acre. It is significant that they had smaller average farms but fed more livestock and still had $1,330 more crop income per farm than the less successful operators.

On the expense side of the account the more profitable farms had more labor expense but slightly less machinery expense per acre. Altogether they had about $1 an acre more operating expense than the less profitable farms.

The situation is summed up in the figures showing gross income and expense per acre. The 14 most profitable farms had an average gross income of $27.22 with an expense of $11.01 an acre as compared with $14.96 income and $10.02 expense for

the 14 least profitable farms. This resulted in net incomes of $16.21 and $4.94 an acre respectively for the two groups.

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

Fulton and Schuyler Counties - 1928

Item	Your farm	Average of 41 farms	14 most profitable farms	14 least profitable farms
Capital Investments - Total	$	$39 809	$41 104	$42 709
Land		29 727	31 140	31 750
Farm improvements		3 999	3 435	4 253
Machinery and equipment		1 375	1 574	1 555
Feed, grain and supplies		1 690	1 897	1 770
Livestock - Total		3 018	3 058	3 381
Horses		534	494	515
Cattle		1 098	1 207	1 322
Hogs		1 121	1 052	1 334
Sheep		141	190	69
Poultry		124	115	141
Bees		---	---	---
Rabbits		---	---	---
Receipts - Net Increases - Total	$	$ 5 024	$ 6 693	$ 3 983
Feed, grain and supplies		1 094	1 792	462
Labor off the farm		45	70	41
Miscellaneous		5	11	2
Livestock - Total		3 880	4 820	3 478
Horses		---	---	---
Cattle		934	1 528	850
Hogs		2 251	2 509	2 040
Sheep		100	108	62
Poultry		111	129	91
Egg sales		125	91	188
Dairy sales		359	455	247
Bees		---	---	---
Rabbits		---	---	---
Expenses - Net Decreases - Total	$	$ 1 691	$ 1 797	$ 1 811
Farm improvements		212	218	222
Machinery and equipment		404	408	500
Feed, grain and supplies		---	---	---
Misc. livestock expense		49	48	42
Miscellaneous crop expense		214	224	230
Hired labor		429	502	416
Taxes, insurance, etc.		353	354	367
Miscellaneous expenses		25	26	23
Horses - decreases		5	17	11
Miscellaneous livestock decreases		---	---	---
Receipts less expenses	$	$ 3 333	$ 4 896	$ 2 172
Total unpaid labor		870	911	858
Operator's labor		699	707	711
Family labor		171	204	147
Net income from investment and management		2 463	3 985	1 314
Rate earned on investment	%	6.19%	9.69%	3.08%
Income left before paying for operator's labor		3 162	4 692	2 025
5 percent of Capital Invested		1 990	2 055	2 135
Labor and management wage	$	$ 1 172	$ 2 637	$ - 110

Fulton and Schuyler Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 41 farms	14 most profitable farms	14 least profitable farms
Size of farm - acres		238.2	245.9	266.3
Percent of land area tillable	%	70.6%	69.3%	64.0%
Acres in Corn		67.6	64.5	67.0
Oats		22.9	24.2	23.2
Wheat		27.2	38.8	22.7
Crop yields - Corn, bu. per acre		47.9	52.6	44.9
Oats, bu. per acre		44.4	46.6	41.4
Wheat, bu. per acre		24.1	26.1	21.0
Returns per $100 of feed fed to productive livestock		140	161	125
Returns per $100 invested in all productive livestock		145	158	122
For $100 in Cattle		99	114	78
Hogs		202	236	168
Poultry		187	185	202
Investment in productive livestock per acre		11.22	12.43	10.68
Receipts from productive livestock per acre		16.29	19.60	13.06
Man labor cost per acre		5.45	5.75	4.78
Crop acres per man		84.7	77.8	88.1
Crop acres per horse (with tractor)		29.2	29.8	31.7
(without tractor)		20.4	19.1	25.0
Expenses per $100 gross income		51.00	40.00	67.00
Machinery cost per acre		1.70	1.66	1.88
Farm improvements cost per acre		.89	.89	.83
Gross receipts per acre		21.09	27.22	14.96
Total expenses per acre		10.75	11.01	10.02
Net receipts per acre		10.34	16.21	4.94
Farms with tractor		61.0 %	64.3 %	71.4 %
Value of land per acre		125	127	119
Total investment per acre		167	167	160

Find Your Farm Leaks

Fulton and Schuyler Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
13.2	69	65	38	169	342	327	25.22	30.29	1.95	120	43	34	16	42	380
12.2	66	62	36	159	322	307	23.22	28.29	2.45	115	41	32	21	39	360
11.2	63	59	34	149	302	287	21.22	26.29	2.95	110	39	30	26	36	340
10.2	60	56	32	139	282	267	19.22	24.29	3.45	105	37	28	31	33	320
9.2	57	53	30	129	262	247	17.22	22.29	3.95	100	35	26	36	30	300
8.2	54	50	28	119	242	227	15.22	20.29	4.45	95	33	24	41	27	280
7.2	51	47	26	109	222	207	13.22	18.29	4.95	90	31	22	46	24	260
6.2	48	44	24	99	202	187	11.22	16.29	5.45	85	29	20	51	21	240
5.2	45	41	22	89	182	167	9.22	14.29	5.95	80	27	18	56	18	220
4.2	42	38	20	79	162	147	7.22	12.29	6.45	75	25	16	61	15	200
3.2	39	35	18	69	142	127	5.22	10.29	6.95	70	23	14	66	12	180
2.2	36	32	16	59	122	107	3.22	8.29	7.45	65	21	12	71	9	160
1.2	33	29	14	49	102	87	1.22	6.29	7.95	60	19	10	76	6	140
0.2	30	26	12	39	82	67	---	4.29	8.45	55	17	8	81	3	120
-0.8	27	23	10	29	62	47	---	2.29	8.95	50	15	6	86	-	100

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management
and

LASALLE COUNTY FARM BUREAU

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty Farms

for

1928

The farm account is a guide to
more profitable farm management if
its facts are studied and used.

Urbana, Illinois

June, 1929

M-127

ANNUAL FARM BUSINESS REPORT

LaSalle County, Illinois, 1928

Prepared by R. R. Hudelson, G. B. Byers, and H. C. M. Case*

The 30 farmers in LaSalle County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 4.4 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $605, there remains a rate of 3.4 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $354. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is nothing left as pay for management in operating the business.

On account of the difficulty in getting records of products used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $206 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $271 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average LaSalle County farmer earned about 2.4 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for LaSalle County since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These

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*C. E. Gates and L. C. Cunningham, farm advisers in LaSalle County, cooperated in supervising and collecting the records used in this report.

industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,279 larger net incomes than the third which were least successful.

There was a difference of only 5 acres in average size of farm between the most profitable and the least profitable 10 farms. Difference in size of farm was therefore not a factor in determining the difference in net income. There was no practical difference in percentage of tillable land and very little difference in the acreage per farm of the principal crops. The least profitable farms did have 14 acres more land in oats.

As a rule reports of this type show considerably higher yields on the more profitable farms but in this case the differences in yield are small. The most profitable 10 farms did produce about 2 bushels more corn, 4½ bushels more oats, 3 bushels more wheat, and 4½ bushels more barley per acre than the least profitable 10 farms and this advantage was a material help toward better farm earnings.

The biggest single factor favoring the more successful farm operators was that of a greater efficiency in handling and feeding livestock. Having more livestock per acre was also in their favor. The more profitable 10 farms produced a livestock income of $152 for each $100 worth of feed fed as compared with a corresponding income of only $102 for each $100 worth of feed fed on the least profitable 10 farms. Since livestock income must cover other costs besides feed including such items as labor, pasture, shelter and interest it is evident that the least successful farmers did not make any profit on feeding livestock. This conclusion as to relative efficiency is further substantiated by the figures showing returns per $100 invested in all productive livestock and by the returns per $100 invested in cattle, hogs, and poultry separately. The most profitable 10 farms with $4.64 more livestock investment per acre produced $10.79 more livestock income per acre. It was chiefly due to the livestock enterprises that these more profitable farms did 38 percent more gross business than the least profitable farms on about the same acreage of land. It is especially noticeable that the more profitable farms had larger and more efficient dairy enterprises. The more profitable farms averaged 11.2 cows while the less profitable farms averaged 7.7 cows. The average dairy sales per cow amounted to $122 and $36 respectively for the two groups.

On the expense side of the business the more successful farmers had $1.42 an acre less labor cost and 61 cents an acre less improvements cost while there was practically no difference in machinery and equipment cost per acre. All together the more successful farm operators had $2.21 an acre less operating cost per acre. The big difference was in the income and not in the expense.

The situation is summed up in the figures for gross income and expense per acre. The most profitable 10 farms had average gross incomes of $30.60 with an expense of $13.64 an acre as compared with $22.65 income and $15.85 expense for the least profitable 10 farms. This resulted in average net incomes of $16.96 and $6.80 an acre respectively for the two groups.

This is the fifth year that an annual farm business report has been published for LaSalle County. A number of the same identical farms have been included each year. The following table presents an interesting comparison of income and investment figures for the five years. The better earnings shown for 1924 were chiefly due to a higher scale of grain prices prevailing that year which in turn was due to a world shortage of wheat and corn. The moderate improvement of 1928 was due in part at least to a better yield and to a much better quality of corn. The 1927 corn crop was so low in quality that it did not bring the apparent market price when sold and it produced poor results when fed.

Comparative Earnings on Some LaSalle County Farms

Item	1924	1925	1926	1927	1928
Number of farms included	34	32	40	32	30
Average size of farms in acres	247	242	204	224	223
Average rate earned on investment	7.2%	2.7%	2.5%	3.7%	4.4%
Average value of land per acre	$217	$216	$217	$214	$206
Average investment per acre	274	279	283	276	271
Investment in livestock per farm	2,848	3,304	2,836	2,808	3,080
Investment in cattle per farm	1,101	1,345	1,335	1,135	1,401
Investment in hogs per farm	551	728	469	699	735
Investment in poultry per farm	120	143	121	128	133
Gross income per acre	32.67	20.81	22.30	24.09	26.16
Operating cost per acre	12.91	13.28	15.25	13.82	14.27
Grain income less feed purchases per farm	5,347	1,891	1,769	2,578	2,638
Miscellaneous income per farm	82	65	27	44	61
Livestock income per farm	2,650	3,075	2,749	2,774	3,133
Gross income per farm	8,079	5,031	4,545	5,396	5,832
Cattle income per farm	464	617	356	486	761
Dairy sales per farm	644	743	1,148	820	809
Hog income per farm	1,103	1,211	953	1,073	1,122
Poultry income per farm	180	229	193	228	302

Some points of strength and some of weakness in your own farm business may be found by comparing the factors from your own record in the following tables with the same factors for the average farm as well as with the farms of the high and low profit groups.

LaSalle County - 1928

Item	Your farm	Average of 30 farms	10 most profitable farms	10 least profitable farms
Capital Investment - Total	$	$60 511	$60 009	$58 459
Land		46 013	44 383	44 980
Farm improvements		5 795	5 352	5 789
Machinery and equipment		2 049	2 057	2 099
Feed, grain and supplies		3 574	4 636	2 936
Livestock - Total		3 080	3 581	2 655
Horses		664	776	649
Cattle		1 401	2 058	802
Hogs		755	528	889
Sheep		147	85	173
Poultry		133	134	142
Goats		--	--	--
Receipts - Net Increases - Total	$	$ 5 832	$ 6 769	$ 4 907
Machinery		--	--	--
Feed, grain and supplies		2 638	2 304	2 910
Labor off the farm		46	58	42
Miscellaneous		15	28	7
Livestock - Total		3 133	4 379	1 948
Horses		--	--	--
Cattle		761	1 312	344
Hogs		1 122	1 313	889
Sheep		112	98	110
Poultry		104	83	101
Egg sales		198	206	134
Dairy sales		809	1 367	288
Goats		27	--	82
Expenses - Net Decreases - Total	$	$ 2 220	$ 2 142	$ 2 414
Farm improvements		362	316	442
Machinery and equipment		640	644	637
Feed, grain and supplies		--	--	--
Miscellaneous livestock expense		62	66	74
Miscellaneous crop expense		188	198	181
Hired labor		510	470	607
Taxes, insurance, etc.		419	369	440
Miscellaneous expenses		31	32	31
Horses - decreases		8	47	2
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 3 612	$ 4 627	$ 2 493
Total unpaid labor		961	876	1 021
Operator's labor		720	720	720
Family labor		241	156	301
Net income from investment and management		2 651	3 751	1 472
Rate earned on investment	%	4.38%	6.25%	2.52%
Income left before paying for operator's labor		3 371	4 471	2 192
5 percent of Capital Invested		3 017	3 000	2 923
Labor and management wage	$	$ 354	$ 1 471	$ - 731

LaSalle County - 1923

Factors helping to analyze the farm business	Your farm	Average of 30 farms	10 most profitable farms	10 least profitable farms
Size of farm - acres		222.9	221.2	216.6
Percent of land area tillable		92.0	90.7	92.2
Acres in Corn		88.9	84.6	86.2
Oats		36.4	28.5	42.6
Wheat		19.6	22.8	16.8
Barley		12.0	6.5	9.4
Crop yields - Corn, bu. per acre		47.6	49.8	48.0
Oats, bu. per acre		46.9	49.0	44.5
Wheat, bu. per acre		18.8	19.0	15.7
Barley, bu. per acre		30.0	33.5	29.0
Return per $100 of feed fed to productive livestock		135	152	102
Returns per $100 invested in all productive livestock		122	143	98
For $100 in Cattle		101	119	74
Hogs		168	220	124
Poultry		219	228	161
Investment in productive livestock per acre		11.55	13.84	9.20
Receipts from productive livestock per acre		14.06	19.79	9.00
Man. labor cost per acre		6.60	6.09	7.51
Crop acres per man		93.8	103.7	81.8
Crop acres per horse (with tractor)		31.8	26.4	33.4
(without tractor)		21.7	27.7	19.1
Expenses per $100 gross income		55	45	70
Machinery cost per acre		2.87	2.91	2.94
Farm improvements cost per acre		1.62	1.43	2.04
Gross receipts per acre		26.16	30.60	22.65
Total expenses per acre		14.27	13.64	15.85
Net receipts per acre		11.89	16.96	6.80
Farms with tractor		70.0%	70.0%	60 %
Value of land per acre		206	201	208
Total investment per acre		271	271	270

Find Your Farm Leaks

LaSalle County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
11.4	69	68	33	171	308	359	25.55	28.06	3.00	130	46	36	20	47	360
10.4	66	65	31	161	288	339	23.55	26.06	3.50	125	44	34	25	44	340
9.4	63	62	29	151	268	319	21.55	24.06	4.00	120	42	32	30	41	320
8.4	60	59	27	141	248	299	19.55	22.06	4.50	115	40	30	35	38	300
7.4	57	56	25	131	228	279	17.55	20.06	5.00	110	38	28	40	35	280
6.4	54	53	23	121	208	259	15.55	18.06	5.50	105	36	26	45	32	260
5.4	51	50	21	111	188	239	13.55	16.06	6.00	100	34	24	50	29	240
4.4	48	47	19	101	168	219	11.55	14.06	6.50	95	32	22	55	26	220
3.4	45	44	17	91	148	199	9.55	12.06	7.00	90	30	20	60	23	200
2.4	42	41	15	81	128	179	7.55	10.06	7.50	85	28	18	65	20	180
1.4	39	38	13	71	108	159	5.55	8.06	8.00	80	26	16	70	17	160
0.4	36	35	11	61	88	139	3.55	6.06	8.50	75	24	14	75	14	140
-0.6	33	32	9	51	68	119	1.55	4.06	9.00	70	22	12	80	11	120
-1.6	30	29	7	41	48	99	----	2.06	9.50	65	20	10	85	8	100
-2.6	27	26	5	31	28	79	----	----	10.00	60	18	8	90	5	80

UNIVERSITY OF ILLINOIS

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Department of Farm Organization and Management

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Marshall-Putnam County Farm Bureau

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June 1929

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ANNUAL FARM BUSINESS REPORT

Marshall and Putnam Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 30 farmers in Marshall and Putnam Counties who kept financial records in the Illinois Farm Account project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.8 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $532, there remains a rate of 4.8 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1,175. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $455 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $171 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $230 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Marshall or Putnam County farmer earned about 3.8 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for these counties since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number

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of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $3,005 larger net incomes than the third which were least successful.

There was a difference of only 1 acre in average size between farms of the less and those of the more successful groups. Difference in size of farm was therefore not a factor in determining the difference in net income between the two groups. Neither was there much difference in acreage of the more important crops.

One important factor favoring the more profitable farms was that of higher crop yields. The 10 most profitable farms produced 11 bushels more corn, 2 bushels more oats, 3 bushels more wheat, and $2\frac{1}{2}$ bushels more barley per acre than the 10 least profitable farms. The advantage in corn yield was very important since corn is the principal crop on these farms. The more profitable farms produced 947 bushels more corn per farm on exactly the same acreage at about the same cost.

Another very important factor favoring the more successful farm operators was a higher efficiency in handling and feeding livestock. The 10 most successful farms produced a livestock income of $159 for each $100 worth of feed fed as compared with a corresponding income of $101 for each $100 worth of feed fed on the 10 least successful farms. This conclusion as to relative efficiency in livestock production is further supported by the returns per $100 invested in all livestock as well as the returns per $100 invested in cattle, hogs and poultry separately. With almost exactly the same investment per acre in livestock, the 10 most successful farmers realized $5 an acre more livestock income and still had more income from crops than the 10 least successful farmers. The figures for four years indicate a tendency toward more livestock production in these counties. With this tendency efficiency in handling and feeding livestock will increase in importance. Hog production is the largest livestock enterprise on the average farm of the district and efficiency in handling and feeding hogs is therefore one of the most important factors in determining net incomes.

On the expense side of the account there was little difference between the two groups in labor costs, but the less successful farms had somewhat higher costs per acre for equipment and improvements. Altogether the operating costs were about $1 an acre higher on the less successful farms. The big difference was in income and not in expense.

The situation is summed up in the figures showing gross income and expense per acre. The 10 most profitable farms produced an average income of $29.89 with

an expense of $11.63 as compared with $19.08 income and $12.56 expense for the 10 least profitable farms. This resulted in average net incomes of $18.26 and $6.52 an acre respectively for the two groups.

The following table presents an interesting comparison of income and investment figures for some farms in Marshall and Putnam counties for the last three years. Allowance must be made for the fact that some records from adjoining counties were included for 1926 and 1927. It is evident that 1928 was the most favorable year for farm earnings since 1924.

Comparative Income and Investment Figures on Some Farms in Marshall-Putnam, Stark and Bureau Counties

Item	1925[1]	1926[2]	1927[3]	1928[1]
Number of farms included	27	41	46	30
Average size of farm in acres	227	195	207	232
Average rate earned, percent	4.3	4.4	3.7	5.8
Average value of land per acre	$209	$195	$180	$171
Average investment per acre	273	258	244	230
Investment in livestock per farm	3,428	3,285	4,114	3,771
Investment in cattle per farm	1,223	1,112	1,296	1,462
Investment in hogs per farm	1,164	1,333	1,712	1,527
Investment in poultry per farm	91	116	128	124
Gross income per acre	25.15	24.32	22.08	26.02
Operating cost per acre	13.33	13.03	13.10	12.57
Crop income less feed purchases per farm	2,559	1,018	1,071	980
Miscellaneous income per farm	95	48	46	102
Livestock income per farm	3,060	3,686	3,446	4,948
Cattle income per farm	512	622	1,108	1,287
Dairy income per farm	206	206	267	310
Hog income per farm	2,050	2,599	1,826	3,039
Poultry income per farm	188	192	167	244
Gross income per farm	5,714	4,752	4,563	6,030

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

[1]Records from Marshall and Putnam Counties, 1925 and 1928.

[2]Records from Marshall, Putnam, and Stark Counties for 1926.

[3]Records from Marshall, Putnam, Stark, and Bureau Counties, 1927.

Marshall-Putnam Counties - 1928

Item	Your farm	Average of 30 farms	Ten most profitable farms	Ten least profitable farms
Capital Investments - Total	$	$53 214	$53 727	$56 850
Land		39 675	41 184	42 545
Farm improvements		4 678	4 532	4 589
Machinery and equipment		1 981	1 841	2 482
Feed, grain and supplies		3 109	2 790	3 631
Livestock - Total		3 771	3 380	3 603
Horses		621	613	650
Cattle		1 462	1 490	1 085
Hogs		1 527	1 122	1 721
Sheep		34	21	27
Poultry		124	125	120
Bees		1	1	--
Dogs		2	8	--
Receipts - Net Increases - Total	$	$ 6 030	$ 7 638	$ 4 855
Farm improvements		---	---	---
Feed, grain and supplies		980	2 730	1 157
Labor off the farm		94	70	134
Miscellaneous		8	2	9
Livestock - Total		4 948	4 836	3 555
Horses		--	--	7
Cattle		1 287	1 000	595
Hogs		3 039	3 102	2 531
Sheep		66	83	9
Poultry		118	127	93
Egg sales		126	160	114
Dairy sales		310	358	206
Bees		1	3	--
Dogs		1	3	--
Expenses - Net Decreases - Total	$	$ 1 968	$ 1 869	$ 2 282
Farm improvements		204	136	273
Machinery and equipment		533	483	737
Feed, grain and supplies		--	--	--
Misc. livestock expense		70	66	55
Miscellaneous crop expense		201	208	222
Hired labor		464	419	569
Taxes, insurance, etc.		459	514	397
Miscellaneous expenses		27	24	29
Horses - decreases		10	19	--
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 4 062	$ 5 769	$ 2 573
Total unpaid labor		946	1 105	914
Operator's labor		719	720	720
Family labor		227	385	194
Net income from investment and management		3 116	4 664	1 659
Rate earned on investment	%	5.86%	8.68%	2.92%
Income left before paying for operator's labor		3 835	5 384	2 379
5 percent of Capital Invested		2 660	2 686	2 842
Labor and management wage	$	$ 1 175	$ 2 698	$ - 463

Marshall-Putnam Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 30 farms	Ten most profitable farms	Ten least profitable farms
Size of farm - acres		231.7	255.5	254.5
Percent of land area tillable		84.5	77.3	84.3
Acres in Corn		82.3	85.5	85.9
Oats		27.2	27.7	30.4
Wheat		26.0	29.1	32.6
Barley		14.3	14.7	17.9
Crop yields - Corn, bu. per acre		53.1	58.1	46.8
Oats, bu. per acre		48.7	47.1	45.4
Wheat, bu. per acre		21.5	22.8	19.4
Barley, bu. per acre		30.6	31.2	28.6
Return per $100 of feed fed to productive livestock		118	159	101
Returns per $100 invested in all productive livestock		150	164	120
For $100 in Cattle		100	85	74
Hogs		199	257	149
Poultry		183	228	144
Investment in productive livestock per acre		14.20	11.57	11.59
Receipts from productive livestock per acre		21.35	18.93	13.94
Man labor cost per acre		6.08	5.96	5.83
Crop acres per man		91.6	88.7	98.8
Crop acres per horse (with tractor)		28.0	28.5	26.7
(without tractor)		22.0	22.4	20.5
Expenses per $100 gross income		48	39	66
Machinery cost per acre		2.30	1.89	2.89
Farm improvements cost per acre		.88	.53	1.08
Gross receipts per acre		26.02	29.89	19.08
Total expenses per acre		12.57	11.63	12.56
Net receipts per acre		13.45	18.26	6.52
Farms with tractor		73.3%	80.0%	80.0%
Value of land per acre		171	161	167
Total investment per acre		230	210	223

Find Your Farm Leaks

Marshall and Putnam Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse				
											Tractor	No tractor			
12.8	74	70	35	170	339	323	28.20	35.35	2.50	130	42	36	15	47	370
11.8	71	67	33	160	319	303	26.20	33.35	3.00	125	40	34	20	44	350
10.8	68	64	31	150	299	283	24.20	31.35	3.50	120	38	32	25	41	330
9.8	65	61	29	140	279	263	22.20	29.35	4.00	115	36	30	30	38	310
8.8	62	58	27	130	259	243	20.20	27.35	4.50	110	34	28	35	35	290
7.8	59	55	25	120	239	223	18.20	25.35	5.00	105	32	26	40	32	270
6.8	56	52	23	110	219	203	16.20	23.35	5.50	100	30	24	45	29	250
5.8	53	49	21	100	199	183	14.20	21.35	6.00	95	28	22	50	26	230
4.8	50	46	19	90	179	163	12.20	19.35	6.50	90	26	20	55	23	210
3.8	47	43	17	80	159	143	10.20	17.35	7.00	85	24	18	60	20	190
2.8	44	40	15	70	139	123	8.20	15.35	7.50	80	22	16	65	17	170
1.8	41	37	13	60	119	103	6.20	13.35	8.00	75	20	14	70	14	150
0.8	38	34	11	50	99	83	4.20	11.35	8.50	70	18	12	75	11	130
-0.2	35	31	9	40	79	63	2.20	9.35	9.00	65	16	10	80	8	110
-1.2	32	28	7	30	59	43	--	7.35	9.50	60	14	8	85	5	90

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

WOODFORD COUNTY FARM BUREAU

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Forty-five Farms

for

1928

The farm account is a guide to more profitable farm management if its facts are studied and used.

Urbana, Illinois

May, 1929

M-130

ANNUAL FARM BUSINESS REPORT

Woodford County, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 45 farmers in Woodford County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.5 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $448, there remains a rate of 4.5 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $943. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $223 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $188 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $239 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Woodford County farmer earned about 3.5 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Woodford County since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available

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* H. A. deWerff, farm adviser in Woodford County, cooperated in supervising and collecting the records used in this report.

which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1597 larger net incomes than the third which were least successful.

The 15 most profitable farms averaged 35 acres smaller than the 15 least profitable farms. This is the third year for Woodford County that the more profitable group of farms has averaged smaller than the less profitable group. This usually has not been true in other areas, however, and it is doubtful whether smaller size had any influence in causing the higher rates earned on the investments. Within the limits represented by these farms larger size should give opportunities to use labor, equipment, and improvements more efficiently.

One advantage of the 15 most profitable farms was in their higher crop yields. These farms produced 8 bushels more corn, 4 bushels more oats, and $2\frac{1}{2}$ bushels more barley per acre than the 15 least profitable farms. Higher yields usually mean lower costs per bushel or ton of crop produced.

The greatest advantages of the more successful farm operators were due to their higher efficiency with livestock and to having more livestock per acre. Both groups of farms had almost exactly the same average amount of income from crops, but the 15 most profitable farms produced about $1,000 more livestock income than the 15 least profitable farms in spite of their smaller size. The large amount of efficiently handled livestock therefore enabled the more successful farmers to do about $1,000 more business on 35 less acres of land. They therefore had relatively less taxes and interest to meet. The amount of business done is more important than the number of acres farmed and the gross income is the best measure of volume of business.

The greater efficiency of the livestock enterprises on the 15 most profitable farms is best shown by the fact that for each $100 worth of feed fed on these farms there was realized a livestock income of $149 while on the 15 least profitable farms the corresponding income was only $90 for each $100 worth of feed fed. Since livestock income must cover other items of cost besides feed including especially labor, pasture, shelter, interest, etc, it is evident that livestock did not pay the average farmer in the less successful group. The feed records used in this analysis were secured by subtracting the total sales and closing inventories from the total of beginning inventories, purchases, and production. They are therefore not as accurate as if feed records were kept. The above conclusion as to efficiency is borne out, however, by the returns per $100 invested in livestock. These figures show a higher efficiency on the more profitable farms not only on all productive livestock but on cattle, hogs and poultry figured separately. So long as the livestock was handled profitably on the 15 most profitable farms, it was an advantage to them that they had more livestock. With $1.91 more livestock investment per acre, they produced $7.55 more livestock income per acre.

As might be expected with relatively more livestock, the more successful farmers had slightly higher labor costs per acre. They saved on other costs tho so that their total operating expense per acre was slightly lower than on the less successful farms.

The situation is summed up in the figures showing gross income and expense per acre. The 15 most profitable farms had an average gross income of $30.45 and an expense of $11.94 an acre. This compares with $20.05 income and $12.52 expense on the 15 least profitable farms. This results in net incomes of $18.51 and $7.53 respectively.

The following table presents an interesting comparison of farm income and investment figures on Woodford County farms for the last five years. It is evident that average farm earnings were better for 1928 than for any year since 1924. This is due to larger incomes from both crops and livestock. It is significant that the rate earned varies directly with the gross income. The gross income per acre varies much more widely than the operating cost per acre from year to year as well as from farm to farm.

Comparative Earnings on Woodford County Farms, 1924 to 1928

Item	1924	1925	1926	1927	1928
Number of farms included	101	44*	55	54	45
Average size of farms in acres	208	190	191	200	187
Average rate earned, percent	7.2	3.3	2.9	3.5	5.5
Average value of land per acre	$223	$211	$200	$189	$188
Average investment per acre	281	266	250	235	259
Investment in livestock per farm	2655	2223	2234	2468	2404
Investment in cattle per farm	910	740	730	741	948
Investment in hogs per farm	697	530	639	899	667
Investment in poultry per farm	141	123	147	147	150
Gross income per acre	32.58	22.06	19.96	20.13	25.79
Operating cost per acre	12.21	13.16	12.59	11.81	12.50
Crop income less feed purchases per farm	4399	1996	1440	1715	2212
Miscellaneous income per farm	80	48	34	29	46
Livestock income per farm	2300	2148	2340	2298	2564
Gross income per farm	6779	4192	3814	4042	4822
Cattle income per farm	404	287	283	456	413
Dairy sales per farm	258	293	343	392	458
Hog income per farm	1328	1271	1434	1171	1350
Poultry income per farm	233	254	249	252	301

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm, as well as on the farms of the group making the best and the group making the least profits.

*Beginning in 1925 a new accounting project was organized in which 62 Woodford County farms were included, thus reducing the number in this project.

Woodford County - 1928

Item	Your farm	Average of 45 farms	15 most profitable farms	15 least profitable farms
Capital Investment - Total	$	$44 779	$35 395	$50 917
Land		35 046	27 105	39 896
Farm improvements		3 199	2 554	3 822
Machinery and equipment		1 421	1 312	1 441
Feed, grain and supplies		2 709	2 275	3 098
Livestock - Total		2 404	2 169	2 660
Horses		592	523	673
Cattle		948	860	1 037
Hogs		667	538	743
Sheep		47	77	58
Poultry		150	171	149
Bees		---	---	---
Receipts - Net Increases - Total	$	$ 4 822	$ 5 165	$ 4 110
Machinery		---	---	---
Feed, grain and supplies		2 212	2 168	2 139
Labor off the farm		37	73	20
Miscellaneous		9	7	12
Livestock - Total		2 564	2 917	1 939
Horses		6	39	6
Cattle		413	367	331
Hogs		1 350	1 512	926
Sheep		36	64	34
Poultry		113	146	97
Egg sales		188	259	130
Dairy sales		458	530	415
Bees		---	---	---
Expenses - Net Decreases-Total	$	$ 1 440	$ 1 108	$ 1 688
Farm improvements		163	142	182
Machinery and equipment		335	212	388
Feed, grain and supplies		---	---	---
Misc. livestock expense		32	32	29
Miscellaneous crop expense		174	172	184
Hired labor		302	210	391
Taxes, insurance, etc.		411	320	492
Miscellaneous expenses		23	20	22
Horses - decreases		---	---	---
Miscellaneous livestock decreases		---	---	---
Receipts less expenses	$	$ 3 382	$ 4 057	$ 2 422
Total unpaid labor		897	917	879
Operator's labor		697	708	684
Family labor		200	209	195
Net income from investment and management		2 485	3 140	1 543
Rate earned on investment	%	5.55%	8.87%	3.03%
Income left before paying for operator's labor		3 182	3 848	2 227
5 percent of Capital Invested		2 239	1 770	2 546
Labor and management wage	$	$ 943	$ 2 078	$ - 319

Woodford County - 1928

Factors helping to analyze the farm business	Your farm	Average of 45 farms	15 most profitable farms	15 least profitable farms
Size of farm - acres		186.8	169.6	205.3
Percent of land area tillable		87.0%	79.6%	92.5%
Acres in Corn		74.9	65.3	83.4
Oats		40.2	25.5	50.7
Wheat		5.7	8.1	5.5
Barley		7.4	9.8	7.5
Crop yields - Corn, bu. per acre		55.1	57.4	49.6
Oats, bu. per acre		40.7	42.7	38.7
Wheat, bu. per acre		17.8	16.1	16.3
Barley, bu. per acre		27.0	28.2	25.8
Return per $100 of feed fed to productive livestock		123	149	90
Returns per $100 invested in all productive livestock		142	164	112
For $100 in Cattle		93	104	81
Hogs		206	246	151
Poultry		198	224	164
Investment in productive livestock per acre		9.61	10.33	8.42
Receipts from productive livestock per acre		13.68	16.97	9.42
Man labor cost per acre		6.42	6.63	6.20
Crop acres per man		89.1	81.4	92.0
Crop acres per horse (with tractor)		25.2	22.9	27.6
(without tractor)		20.6	22.5	17.8
Expenses per $100 gross income		48	39	62
Machinery cost per acre		1.80	1.25	1.89
Farm improvements cost per acre		.87	.84	.89
Gross receipts per acre		25.79	30.45	20.05
Total expenses per acre		12.50	11.94	12.52
Net receipts per acre		13.29	18.51	7.53
Farms with tractor		64.4%	73.3%	66.7%
Value of land per acre		188	160	194
Total investment per acre		239	208	248

Find Your Farm Leaks

Woodford County - 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12.5	76	61	32	163	346	338	16.60	27.70	2.90	125	39	34	15	46	320
11.5	73	58	30	153	326	318	15.60	25.70	3.40	120	37	32	20	43	300
10.5	70	55	28	143	306	298	14.60	23.70	3.90	115	35	30	25	40	280
9.5	67	52	26	133	286	278	13.60	21.70	4.40	110	33	28	30	37	260
8.5	64	49	24	123	266	258	12.60	19.70	4.90	105	31	26	35	34	240
7.5	61	46	22	113	246	238	11.60	17.70	5.40	100	29	24	40	31	220
6.5	58	43	20	103	226	218	10.60	15.70	5.90	95	27	22	45	28	200
5.5	55	40	18	93	206	198	9.60	13.70	6.40	90	25	20	50	25	180
4.5	52	37	16	83	186	178	8.60	11.70	6.90	85	23	18	55	22	160
3.5	49	34	14	73	166	158	7.60	9.70	7.40	80	21	16	60	19	140
2.5	46	31	12	63	146	138	6.60	7.70	7.90	75	19	14	65	16	120
1.5	43	28	10	53	126	118	5.60	5.70	8.40	70	17	12	70	13	100
0.5	40	25	8	43	106	98	4.60	3.70	8.90	65	15	10	75	10	80
-0.5	37	22	6	33	86	78	3.60	1.70	9.40	60	13	8	80	7	60
-1.5	34	19	4	23	66	58	2.60	----	9.90	55	11	6	85	4	40

UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE
Department of Farm Organization and Management
and the
Farm Bureaus of
Livingston, McLean, Tazewell and Woodford Counties
Cooperating

FOURTH ANNUAL REPORT

of the

FARM BUREAU-FARM MANAGEMENT SERVICE

for the year

1928

This report prepared for the farm operated by

_____

Farm account keepers say:
"Farm accounts have more value the longer
they are kept."

Urbana, Illinois

May, 1929

M-136

FOURTH ANNUAL REPORT FOR THE COOPERATORS IN THE FARM BUREAU-FARM MANAGEMENT SERVICE FOR THE YEAR 1928

M. L. Mosher, J. B. Andrews and H. C. M. Case

The one hundred-fifty farmers in east central Illinois who kept records in the Farm Bureau-Farm Management Service in Livingston, McLean, Tazewell and Woodford counties, for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.36 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $590, there remains a rate of 4.66 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct five percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1084. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $364 left as pay for the risk and management in operating the business.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to pay for five to twenty dollars each per year for assistance in the keeping and the analyzing of their records. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rate earned on farms included in this project average about two percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in east central Illinois earned about 3.66 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this area since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent. These industries pay for management in the form of salaries to managers and officers before the rate earned on their net worth is figured.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $189.47 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $251.74 an acre.

The home grown farm produce used by the farm family is not included in the income figures as stated in this report. The farm products used at home were

found to have an average value of from $496.42 per farm at farm prices. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

Differences in Earnings Between Farms

The usual wide variations in the earnings on the most successful and the least successful farms may well be noted (See Table 1). The 30 most profitable of the 150 farms made 5 percent on the investment and had an average of $2737.32 to pay each operator for his own labor and management, while the 30 least profitable farms lacked $716.48 per farm of making 5 percent on the investment and left nothing to the operator for his own labor and management.

This amounts to a total difference of $3453.80 per farm per year in the return for the labor and management of the operators between the high and low groups of farms. This may be expressed in another way by saying, after all expenses were paid and the operator allowed $720 for his own labor, the most profitable group made 8.48 percent on the investment, while the least profitable group made only 2.17 percent on the money invested.

The one-fifth most profitable farms (30 farms) had a total income of $35.09 an acre, while the one-fifth least profitable farms had an income of only $20.25 per acre (see Table 2). The total expenses per acre with no charge for interest on the investment on the two groups of farms were $13.48 and $15.02 per acre respectively. In other words, the most profitable group of farms with $1.54 less expense per acre received $14.84 larger returns per acre. The same table shows that the least profitable farms were somewhat smaller in size on the average and that they had a little smaller investment per acre.

Two Opportunities for Increasing Farm Incomes

Farm earnings may be increased through "What the farmer can do for himself" and "What farmers can do in cooperation." While this report deals with the former, the latter means of helping farmers is important. It is concerned with such matters as the adjustment of tariffs, transportation rates and taxes and the handling of seasonal surpluses of agricultural products. These and similar problems require the organized effort of farmers if they are to present their case effectively before legislative and governmental boards and commissions and in conferences with other groups.

Regarding what the farmer can do for himself, that is concerned with the efficiency with which he operates his own farm business. The wide differences in earnings on farms included in this study operated under similar conditions of soil, climate and markets, show that the individuals have a large opportunity of improving their incomes. This can be accomplished through adopting plans for the organization and operation of their farms which have proved most profitable. In fact the earnings on most farms can be increased more through increased efficiency in operation than can be expected through any rational adjustments of tariff, freight rates or taxes or improved handling of seasonal surpluses.

Increased efficiency on the best corn belt land is justified as a safe means of increasing the farm income as it is the most effective way of reducing

the costs of production. Likewise it will be an effective way of discouraging further expansion of farming to cheap marginal land which should be held out of agricultural production under present conditions.

A careful study of his report by each cooperator will, it is believed, enable him to know rather definitely where he can most readily increase the efficiency of his farm business and how other farmers have more successfully conducted that part of the farm work.

Location of Differences in Incomes Between the More Profitable and the Less Profitable Farms

Most of the difference of approximately $3500 in the average net earnings for each of the 30 most profitable and the 30 least profitable farms is accounted for in Chart 1.

Chart 1. Location of Differences in Incomes Between the 30 Most Profitable and the 30 Least Profitable Farms

Factors considered	The lengths of the shaded bars are in proportion to the amounts of the differences	Average difference
Crop yields	XXXX

feed used. The average amount of feed used on all farms was valued at $2424.92 at farm prices. The larger returns for each $100 of this feed used on the more profitable farms accounts for $790.52 of the difference in average farm income between the two groups of farms. This does not include the cost of keeping horses on the two groups of farms. This greater income to the more profitable farms for each $100 worth of feed used was apparent in case of each class of livestock. For beef cattle, the difference was $62.72, mixed beef and dairy herds $16.29, dairy herds $35.99, hogs $32.65, sheep $20.17, and poultry $28.13.

About one-half of the grain produced on these farms was fed, the rest being sold as grain. In areas where all the grain is fed on the farms, this matter of livestock efficiency becomes relatively more important.

Kinds of Crops Grown - The more profitable farms had a larger proportion of land in the more profitable crops of corn, wheat, alfalfa, sweet clover and canning crops but a smaller acreage of oats, blue grass and timothy than were grown on less profitable farms. The differences in the relative proportions of corn, wheat, oats, and barley accounts for $264.64. (See Chart 1)

Power and Machinery Costs - The total cost per acre of horse and tractor power and machinery on the most profitable farms amounted to only $4.09 per acre compared with a cost of $4.92 per acre on the least profitable farms. This difference in cost of power and machinery of 83 cents per acre would amount to a difference of $194.72 less cost per farm in favor of the most profitable farms.

Miscellaneous Expenses - Expenses other than labor, power and machinery amounted to $4.55 and $5.34 per acre on the respective groups of farms. This difference of 79 cents per acre accounted for $185.35 in the differences in net incomes of the two groups of farms.

Efficiency of Man Labor - The total labor cost, including the operator's and family labor at hired man rates, was $6.97 per acre on the 30 more profitable farms and $7.20 on the less profitable ones. This difference of 23 cents per acre applied to the average size of all farms amounts to only $53.96. This small difference is more significant when one realizes that the returns were nearly twice as high on the more profitable farms.

Amount of Livestock - The more profitable farms fed $11.41 worth of feed per acre, valued at farm prices, while $11.16 worth of feed per acre was fed on the less profitable farms. As an average of all farms, for each $100 worth of feed fed there were livestock returns of $141.97; that is, the product from $100 worth of feed fed on the farm was worth $41.97 more than the farm price of the feed. This difference applied to the additional 25 cents worth of feed per acre used on the more profitable farms accounts for $24.62 of the total difference between the two groups.

Ordinarily, differences in amounts of livestock kept or fed, causes more of the difference in incomes between the most profitable and the least profitable groups of farms than was true with these farms in 1928. For instance, the summary Report of the Farm Bureau-Farm Management Service for the three years of 1925, 1926 and 1927 shows that approximately $660 difference in the incomes between the one-fifth most profitable and the one-fifth least profitable of the farms was due to differences in the amounts of livestock kept and fed.

Prices of Products - No analysis of the differences in incomes due to differences in prices received for products was made in preparing this report. However, it was evident to those working on the records that a comparatively small part of the total difference was due to this factor. It may be noted that the average returns per 100 pounds of pork produced was $9.38 on the one-fifth most profitable and $9.03 on the one-fifth least profitable farms. (See Table 2) This difference of 35 cents per 100 pounds applied to the 17,833 pounds produced on the average of all farms would account for only $62.42. On the other hand the difference due to the difference in feed cost of $1.73 per hundred pounds of pork would account for $308.51 differences in income, or about five times as great as the difference due to prices received.

Table 1 - SUMMARY OF THE YEAR'S FARM BUSINESS

Item	Your farm	Average of 150 farms	Thirty most profitable farms	Thirty least profitable farms
Capital Investments - Total	$	$52 059.02	$58 294.51	$49 524.45
Land		44 450.07	44 110.75	36 293.00
Farm improvements		5 837.38	4 959.47	5 458.41
Machinery and equipment		2 001.28	1 920.66	1 941.12
Feed, grain and supplies		3 564.81	3 889.07	2 731.51
Livestock - Total		3 204.98	3 414.56	3 100.41
Horses		746.58	702.55	720.82
Cattle		1 144.47	1 311.98	1 172.25
Hogs		955.35	965.42	916.50
Sheep		161.17	207.13	111.37
Poultry		177.89	155.05	161.20
Bees		19.52	72.43	18.27
Receipts - Net Increases - Total	$	$ 5 534.36	$ 5 031.99	$ 4 153.01
Farm improvements		---	---	---
Feed, grain and supplies		3 321.89	4 126.22	1 503.46
Labor off the farm		75.78	87.82	76.42
Miscellaneous		9.48	3.40	9.61
Livestock - Total		3 127.71	3 814.55	2 563.52
Horses		5.30	6.54	---
Cattle		670.11	802.95	632.11
Hogs		1 565.90	1 875.55	1 140.30
Sheep		109.78	97.64	70.41
Poultry		137.02	196.92	153.24
Egg sales		167.57	178.72	148.74
Dairy sales		469.47	640.38	418.72
Bees		2.56	15.35	---
Expenses - Net Decreases - Total	$	$ 2 253.22	$ 2 185.24	$ 2 094.49
Farm improvements		297.02	256.77	293.96
Machinery and equipment		518.54	448.83	501.06
Feed, grain and supplies		---	---	---
Misc. livestock expense		46.35	51.59	51.96
Miscellaneous crop expense		266.51	255.20	233.24
Hired labor		612.30	696.45	490.37
Taxes, insurance, etc.		460.55	431.20	434.94
Miscellaneous expenses		51.35	45.20	75.90
Horses - decreases		---	---	7.95
Miscellaneous livestock decreases		---	---	3.11
Receipts less expenses	$	$ 4 281.64	$ 5 846.75	$ 2 058.52
Total unpaid labor		937.45	899.70	985.28
Operator's labor		692.83	705.00	686.50
Family labor		244.62	194.70	298.73
Net income from investment and management		3 344.19	4 947.05	1 073.24
Rate earned on investment	%	5.66%	8.48%	2.17%
Income left before paying for operator's labor		4 037.02	5 652.05	1 759.74
5 percent of Capital Invested		2 952.95	2 914.73	2 476.22
Labor and Management wage	$	$ 1 084.07	$ 2 737.32	$ - 716.48

Table 2 - IMPORTANT FACTORS BY WHICH THE FARM BUSINESS MAY BE STUDIED
Underlined factors are the ones used on the chart, Page 3

Item	Your farm	Average of 150 farms	30 most profitable farms	30 least profitable farms
Gross receipts per acre	$	$ 27.86	$ 35.09	$ 20.25
Total expense per acre		13.60	13.48	15.02
Net receipts per acre		14.26	21.61	5.23
Size of farm		234.6	228.9	205.1
Total investments per acre	$	$251.74	$254.67	$241.49
Land		189.47	192.71	176.97
Farm improvements		24.38	21.66	26.62
Machinery and equipment		8.53	8.39	9.47
Feed, grain and supplies		15.20	16.99	13.32
Horses		3.18	3.07	3.51
Productive livestock		10.48	11.85	11.60
Percent of farm tillable		90.0	91.4	85.4
Percent of tillable land in Higher profit plus one-half medium profit crops		68.4	71.5	66.5
Higher profit crops		60.8	63.4	58.1
Corn		46.2	47.6	43.5
Wheat		4.7	4.1	3.4
Alfalfa		3.0	3.1	1.3
Sweet clover		5.1	5.0	3.6
Canning and truck crops		1.8	3.6	1.3
Medium profit crops		15.1	16.2	16.8
Barley		4.2	4.8	3.9
Soybeans		2.9	1.8	4.7
Spring wheat		2.7	3.2	1.9
Clover		.5	.2	.6
Clover and timothy mixed		2.1	2.6	1.9
Miscellaneous		2.7	3.6	3.8
Lower profit crops		24.1	20.4	25.1
Oats		19.4	16.0	20.9
Timothy		1.6	2.1	1.4
Bluegrass		3.1	2.3	2.8
All legumes		15.0	15.2	17.9
All crops		88.7	89.9	87.6

Table 2 - (Continued)

Item	Your farm	Average of 150 farms	30 most profitable farms	30 least profitable farms
Acres of grain crops per farm				
Corn		97.6	99.4	76.2
Oats		41.1	33.2	36.6
Winter wheat		9.9	8.5	6.0
Spring wheat		5.7	6.6	3.4
Barley		8.8	10.1	6.8
Soybeans - grain and hay		6.1	3.7	8.2
Bushels per acre of grain crops				
Corn		53.0	58.8	47.0
Oats		43.8	48.4	42.3
Winter wheat		18.4	23.5	11.8
Spring wheat		21.3	26.2	21.2
Barley		29.7	33.7	25.4
Soybeans		19.1	14.9	16.1
Productive livestock				
Average investment per acre	$	$ 10.84	$ 11.69	$ 11.60
Total returns per acre		14.68	18.04	14.01
Feed used per acre		10.34	11.41	11.16
Feed to all productive livestock*	$	$2424.92	$2612.16	$2289.56
Beef cattle		1532.85	989.43	1612.98
Mixed cattle		700.05	1152.73	599.90
Dairy cattle		788.06	722.47	833.17
Hogs		1294.67	1401.58	1127.76
Sheep		208.63	161.95	116.79
Poultry		161.05	180.04	169.93
Returns per $100 feed fed to all Productive livestock	$	$ 141.97	$ 158.10	$ 125.50
Beef cattle		132.59	177.86	115.14
Mixed cattle		152.23	159.92	143.63
Dairy cattle		150.57	174.15	138.16
Hogs		127.01	139.21	136.56
Sheep		149.59	150.59	130.42
Poultry		240.59	252.44	224.31
Returns per $100 invested in all productive livestock	$	$ 135.42	$ 154.32	$ 120.78
Poultry		211.60	256.49	226.86
Pounds of pork produced - total		17 833.0	20 798.2	13 309.4
Pounds of pork produced per acre		76.0	90.9	64.9
Feed cost per 100 pounds of pork	$	$ 7.26	$ 6.74	$ 8.47
Returns per 100 pounds of pork	$	$ 9.19	$ 9.38	$ 9.03
Average number of hens kept		116.8	107.0	111.4
Number of eggs per hen		92.5	106.0	86.5

*The average amounts of feed per farm for each class of livestock are averages for only the farms which had the kind of livestock indicated.

Table 2 - (Concluded)

Item	Your farm	Average of 150 farms	30 most profitable farms	30 least profitable farms
Labor, Power and Machinery Studies				
Percent of farms				
With tractors		78.7	76.7	76.7
With trucks		36.7	30.0	33.3
With tractors and trucks		31.3	26.7	26.7
Without tractors or trucks		16.0	20.0	16.6
Average acres in crops		187.3	187.9	153.4
Average number of men		1.96	1.95	1.92
Crop acres per man		95.6	96.4	79.9
Labor cost per crop acre		$ 8.27	$ 8.49	$ 9.62
*Labor efficiency index		100.0	100.7	90.7
Average number of workable horses		6.93	6.58	6.36
Crop acres per horse		27.0	28.6	24.1
Value of feed fed to horses	$	$524.35	$494.51	$500.48
Feed cost per workable horse		75.66	75.15	78.69
Horse feed and depreciation per crop acre		2.77	2.60	3.31
Machinery cost per crop acre		2.77	2.39	3.27
Horse and machinery cost per crop acre		5.54	4.99	6.58
*Horse and machinery efficiency index		100.0	115.6	91.0
Labor plus horse and machinery cost per crop acre		$ 13.81	$ 13.48	$ 16.20
Expense per $100 gross income	$	$ 48.83	$ 38.41	$ 74.16
Expenses per acre of farm		13.60	13.48	15.02
Farm improvements		1.27	1.12	1.44
Horses - decreases		-	-	.04
Misc. livestock - decreases		-	-	.02
Machinery and equipment		2.21	1.96	2.44
Feed, grain and supplies		-	-	-
Miscellaneous livestock expense		.20	.23	.25
Miscellaneous crop expense		1.14	1.12	1.14
Hired and home labor		6.60	6.97	7.20
Taxes, insurance, etc.		1.96	1.88	2.12
Miscellaneous		.22	.20	.37
Family living furnished by farm				
Farm produce used in home	$	$395.95	$418.73	$375.68
House rent (10% of value)		496.42	468.20	521.93
Total living furnished by farm		892.37	886.93	897.61
Number in family		4.9	4.4	4.7
Farm produce used per person		80.31	95.16	79.93

*The "labor efficiency index" for any farm is calculated by finding the number of acres of crops worked on that farm with the same labor cost with which 100 acres of crops is worked on the average of farms of the same size and having the same amount of livestock feeding to do. The "horse and machinery efficiency index" is calculated in the same way.

FARM EFFICIENCY CHART

(See page 11 for an explanation of the use of this chart)

Rate earned on investment	Gross income per acre	Bushels per acre			Percent land in higher profit crops	Feed per acre to productive livestock	Returns per $100 feed to productive livestock				Labor efficiency	Horse and machinery efficiency	Expense per $100 gross income	Size of farm
		Corn	Oats				cattle	Hogs	Sheep	Poultry*	All productive livestock				
12.0	48	75	65		100	30		240	300	460	260	150	180	30	500
7.4	34	60	51		77	15		157	270	273	181	116	130	41	308
6.2	30	54	45		71	11		138	191	222	159	103	108	46	240
5.7	28	53	44		68	10		127	150	212	142	100	100	49	235
5.3	27	50	40		67	8		125	133	194	138	93	91	51	200
3.8	23	46	36		61	5		112	111	159	123	81	77	63	160
0.0	12	30	20		30	0		60	80	60	80	50	50	100	50

*Returns for $100 invested used for poultry.

Explanation of the Farm Efficiency Chart

(See Chart on page 10)

While the farm efficiency chart used in this year's report is more complicated than those used in former years, it will enable cooperators to see more clearly the relative efficiency with which different parts of the farm business are handled. If the following things regarding the plan of the chart are understood its use will not be difficult.

The figure in any column just above the double line across the middle of the chart is the average for all the farms to which that factor applies.

The figure in any column just above the top single line across the chart represents approximately the most efficient farm in the factor named at the top of that column. The figure at the bottom of each column of the chart represents approximately the least efficient farm in that factor.

The figure in any column just above the second from the bottom line across the chart represents approximately the most efficient of the one-fifth of the farms which are lowest in that factor. It also represents approximately the least efficient in the next to the lowest one-fifth of the farms in that factor.

Likewise, the figure in any column just above the next to the top line across the chart represents approximately the least efficient of the one-fifth best farms in that factor. It also represents approximately the most efficient of the second to the best one-fifth group of the farms in that factor. The other lines separate the middle group in each factor from the groups next to it.

By drawing a line across each column at approximately the place which represents the efficiency of his farm in each factor and then, by filling in with a colored crayon or pencil the space below such lines, a cooperator can see more clearly where his farm stands in efficiency in each factor than was provided for the charts used in former years.

COMPARISON OF FOUR YEARS' RECORDS

A comparison of income, investment and efficiency factors for all farms included in each of the four annual reports of the Farm Bureau-Farm Management Service is shown in Table 3, page 12. Most of those who dropped out of the project in 1926 and 1927 were men who stopped farming. However, many of those dropping out in 1928 were among those whose farms proved to be unprofitable. This situation should be taken into account in studying these comparative records.

It may well be noted that the total expense remained fairly constant at about $13.50 per acre. However, the gross receipts varied from $20.74 per acre in 1926 to $27.86 per acre in 1928. These differences were due largely to differences in price levels, yields and quality of crops produced. There seems to have been some increase in the incomes from dairy and poultry products. An increase in the pounds of pork produced per acre indicates an increase in the size of the hog enterprise.

It is apparent that there has been a decided shift from less of the low profit crops to more of the medium profit crops. Much of this shift has been from oats to barley, spring wheat and soybeans. There seems to be some decrease in the labor cost per acre and also in the horse power and machinery cost. The other expenses, consisting mostly of repairs and depreciation on buildings and fences, taxes and miscellaneous crop and livestock expenses, have remained about constant.

Table 3 - Comparison of Four Years' Records

Items	1925	1926	1927	1928
Number of farm records used	225	210	200	150
Rate earned on investment	3.21	2.80	3.72	5.66
Labor and management wage	$-382.00	$-616.00	$ -46.00	$1084.07
Size of farms in acres	232.0	232.1	231.5	234.6
Value of land per acre	$ 191.55	$ 192.24	$ 192.84	$ 189.47
Total investment per acre	258.15	255.93	253.81	251.74
Gross receipts per acre	22.05	20.74	22.78	27.86
Total expense per acre	13.77	13.57	13.33	13.60
Net receipts per acre	8.28	7.17	9.45	14.26
Receipts and Net Increases - Total per farm	$5115.00	$4813.00	$5274.00	$6534.86
Grain less feeds purchased	1901.00	1961.00	2683.00	3321.89
Miscellaneous	105.00	69.00	75.00	85.26
Livestock - total	3109.00	2783.00	2516.00	3127.71
Horses	-	-	5.00	5.30
Cattle	557.00	454.00	562.00	670.11
Dairy products	346.00	353.00	380.00	469.47
Hogs	1845.00	1689.00	1247.00	1565.90
Sheep	101.00	32.00	67.00	109.78
Poultry	118.00	121.00	110.00	137.02
Eggs	137.00	130.00	140.00	167.57
Bees	5.00	4.00	5.00	2.56
Productive Livestock Records				
Investment per acre	$ 9.62	$ 10.43	$ 10.28	$ 10.84
Returns per acre	13.29	13.38	10.85	14.68
Feed used per acre	8.81	8.38	8.06	10.34
Returns per $100 feed used	150.77	159.70	134.57	141.97
Pounds of pork produced per acre	66.8	64.0	74.0	76.0
Bushels per Acre of Crops				
Corn	55.3	51.3	42.0	53.0
Oats	39.2	37.1	34.5	43.8
Winter wheat	18.3	20.6	16.8	18.4
Percent of Tillable Land in				
Higher profit crops	58.2	60.1	59.9	60.8
Medium profit crops	9.8	7.4	13.2	15.1
Lower profit crops	32.0	32.5	26.9	24.1
Expenses per Acre of Farm				
Hired and home labor	$ 6.85	$ 6.67	$ 6.58	$ 6.60
Horse power and machinery	4.80	4.42	4.38	4.42
Other expenses	4.71	4.79	4.73	4.79
Farm produce used in farm home	$ 430.21	$ 466.70	$ 439.15	$ 395.95

ORGANIZATION AND PURPOSE OF THE FARM BUREAU-FARM MANAGEMENT SERVICE

The Farm Bureau-Farm Management Service Project was organized during the latter part of 1924. Its purpose is to assist the cooperating farmers to keep such farm accounts as will enable them to study the efficiency with which they are conducting their farm business and to apply to their individual farms the practices in farm organization and operation which have proved profitable on other farms of a similar type. The cooperators in the project are farm bureau members of Livingston, McLean, Tazewell, and Woodford counties. The project is an outgrowth of the regular farm management extension work begun in Tazewell county in 1915. Some work was done in all of the four counties in 1916.

In Woodford county from 50 to 100 farmers completed farm accounts each year from 1916 to 1921 and beginning in 1921 over 100 records have been closed annually. Farm management tours have played an important part in developing interest in the work. The growing number of farmers keeping records made it impossible for the College of Agriculture to give thru the regular extension work the assistance desired by the farmers. This situation led to the organization of the Farm Bureau-Farm Management Service.

About sixty farm bureau members in each of the four counties cooperated in the project for the three years of 1925, 1926 and 1927. About three-fourths of them continued during 1928 while an analysis of the records secured during the first three years was made. Beginning the latter part of 1928, the project was reorganized for the three-year period of 1929 to 1931 with about 400 farm bureau members who are quite evenly distributed in the same four counties. About three-fourths of the original cooperators continued in the service. The total annual cost is approximately $35 per farm per year. About one-half of the expense is borne by the University of Illinois. This leaves a cost of about $17.50 per farm per year. The fee varies from $12.50 to $25 per year, depending on the size of the farm. In two of the counties, the Farm Bureaus pay a portion of each fee, while in two counties the cooperators pay the entire fee.

As the work is now organized with over 400 cooperating farmers, M. L. Mosher gives the greater part of his time to the preparation of reports and supervision of the work. J. B. Andrews, who assisted with the field work in 1928, is doing the field work in McLean and Tazewell counties. W. A. Herrington, formerly farm adviser in Stephenson county, Illinois, is field man in Livingston and Woodford counties. Each cooperator is being visited on his farm from four to six times during each year. The work is under the direction of H. C. M. Case, in charge of the Department of Farm Organization and Management, acting in cooperation with an advisory committee consisting of one representative of each farm bureau. This committee consists of G. F. Bennett, Livingston county, chairman, Dubois Marquis, McLean county, W. C. Somer, Tazewell county, and J. Frank Felter, Woodford county, who is secretary-treasurer. This committee is responsible to the cooperating farm bureaus for the custody and expenditure of the funds raised by the collection of the cooperator's fees. Each farm bureau collects the fees from its cooperating members and pays them over to the committee.

The organization of the project was made possible by the hearty support and assistance of the four Farm Advisers and their assistants. The Farm Advisers who cooperated in the reorganization were H. O. Allison, Livingston county, Wilbur H. Coultas, McLean county, Ralph E. Arnett, Tazewell county, and H. A. deWerff, Woodford county.

The following discussion entitled

A BUDGET FOR THE FARM BUSINESS

is a part of the report sent to all farmers in Illinois who have cooperated in keeping farm accounts with the University of Illinois and their local county farm bureaus. Farm bureaus in 81 counties are cooperating in the work and reports from the farm advisers indicate that approximately 3000 farmers are enrolled in the project this year. The records kept by farmers not included in the Farm Bureau-Farm Management Service are not closely supervised during the year and provide for a much less complete analysis of the farm business. Acknowledgment is made here to R. R. Hudelson of the Department of Farm Organization and Management for his contribution in the preparation of the following discussion.

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

Macon, Logan, McLean, Piatt, and Tazewell County Farm Bureaus

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Fifty-three Farms

for

1928

The farm account is a guide to
more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May, 1929

M-120

ANNUAL FARM BUSINESS REPORT

Macon, Logan, McLean, Piatt and Tazewell Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 53 farmers in the above named counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.6 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $551, there remains a rate of 4.6 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1,046. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $326 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $180 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $226 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these counties earned about 3.6 percent on his investment for 1928 to pay for use of capital, risk, and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this section since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of

*E. H. Walworth, J. H. Checkley, W. H. Coultas, S. S. Davis, and R. E. Arnett, farm advisers in Macon, Logan, McLean, Piatt, and Tazewell counties, respectively, cooperated in supervising and collecting the records used in this report.

industries for which reports are available for 1926 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $3,256 larger net incomes than the third which were least successful.

There was a difference of only 12 acres in average size between the two groups of farms and they had almost exactly the same percentage of tillable land. Difference in size of farm was therefore not a factor in determining the difference in net earnings. They also had nearly the same acreage of the more important crops.

Larger crop yields constituted one of the most important factors favoring the 18 most profitable farms. They produced an average of 13 bushels more corn, 2 bushels more oats, 2½ bushels more wheat, and 9 bushels more soybeans per acre than the 13 least successful farms. Since the operating cost per acre usually does not increase in proportion to the increased yield, these higher yields resulted in lower costs per bushel of crop. This is true because there were more bushels to spread approximately the same costs over. Lower cost is just as important as higher price in determining the net income. The larger yields also helped to produce a large volume of business, the crop income on the 18 most profitable being about two and a half times as much as on the 18 least profitable farms.

Another of the most important advantages in favor of the more successful farm operators was their greater efficiency in handling and feeding livestock. From each $100 worth of feed fed they realized a livestock income of $192 as compared with $121 for each $100 worth of feed fed by the less successful operators. The livestock income must meet other costs besides feed, such as labor, pasture, shelter, interest, etc. It is clear, therefore, that there was not much profit in livestock on the 18 least profitable farms.

The evidence of greater livestock efficiency is supported also by the larger returns per $100 invested in cattle, hogs, and poultry, as well as by the larger returns per $100 invested in all productive livestock. The more successful farmers had about $2 an acre less investment in livestock but they realized $1.34 an acre more livestock income.

Altho the 18 most successful farm operators realized considerably larger gross incomes from crops and livestock, they managed with slightly less labor and less cost for machinery and equipment. They hired more labor but used less family labor than the 18 least successful operators. The situation is summed up in the figures showing gross income and expense per acre. With an expense of $12.21 the more

successful farmers produced an income of $31.50 an acre compared with $13.25 expense and $19.64 income for the less successful farmers. This resulted in net incomes of $19.29 and $6.39 an acre respectively.

The following table gives an interesting comparison of income and investment figures on farms in this district for the last three years. It is evident that average net earnings were higher for 1928 than for the two preceding years. Other available records indicate that for this section 1924 was the only year better than 1928 since 1919. There appears to be a tendency toward increased dairy sales in this district over the three-year period.

Comparative Earnings for the Macon, Logan, McLean, Piatt and Tazewell County District, 1926 to 1928

Item	1926[1]	1927[2]	1928
Number of farms included	28	31	53
Average size of farm, acres	227	259	244
Average rate earned on the investment, percent	3.3	2.8	5.6
Average value of land per acre	$190	$189	$180
Average investment per acre	244	239	226
Investment in livestock per farm	2885	3133	2780
Investment in cattle per farm	1012	1310	1083
Investment in hogs per farm	885	879	763
Investment in poultry per farm	154	151	147
Gross income per acre	20.95	18.90	25.65
Operating cost per acre	12.97	12.23	12.90
Crop increase less feed purchases per farm	2074	2014	3383
Miscellaneous income per farm	61	55	74
Livestock income per farm	2617	2832	2791
Gross income per farm	4752	4901	6248
Cattle income per farm	666	1133	724
Dairy sales per farm	262	433	593
Hog income per farm	1384	1018	1134
Poultry income per farm	266	234	290

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

[1]Records for Macon, Logan, and Piatt counties were included for 1926
[2]Records for Macon, McLean, Logan and DeWitt counties were included for 1927

Item	Your farm	Average of 53 farms	18 most profitable farms	18 least profitable farms
Capital Investments - Total	$	$55 157	$53 936	$54 165
Land		43 848	42 971	43 318
Farm improvements		3 969	3 639	3 726
Machinery and equipment		1 702	1 652	1 657
Feed, grain and supplies		2 858	3 031	2 294
Livestock - Total		2 780	2 643	3 170
Horses		718	753	730
Cattle		1 083	1 120	1 240
Hogs		763	607	902
Sheep		66	16	169
Poultry		147	147	123
Bees and dogs		3	--	6
Receipts - Net Increases - Total	$	$ 6 248	$ 7 761	$ 4 606
Machinery or improvements		---	---	---
Feed, grain and supplies		3 383	4 452	1 781
Labor off the farm		66	25	28
Miscellaneous		8	9	3
Livestock - Total		2 791	3 275	2 794
Horses		---	10	---
Cattle		724	1 067	793
Hogs		1 134	1 277	1 072
Sheep		47	7	121
Poultry		134	177	94
Egg sales		156	185	109
Dairy sales		593	552	600
Bees and dogs		3	--	5
Expenses - Net Decreases - Total	$	$ 2 160	$ 2 166	$ 2 166
Farm improvements		200	131	219
Machinery and equipment		511	435	581
Feed, grain and supplies		---	---	---
Misc. livestock expense		48	42	59
Miscellaneous crop expense		304	358	285
Hired labor		524	652	524
Taxes, insurance, etc.		520	522	457
Miscellaneous expenses		33	26	36
Horses - decreases		20	--	5
Miscellaneous livestock decreases		---	---	---
Receipts less expenses	$	$ 4 088	$ 5 595	$ 2 440
Total unpaid labor		982	841	942
Operator's labor		698	690	710
Family labor		284	151	232
Net income from investment and management		3 106	4 754	1 498
Rate earned on investment	%	5.63%	8.81%	2.77%
Income left before paying for operator's labor		3 804	5 444	2 208
5 percent of Capital Invested		2 758	2 697	2 708
Labor and management wage	$	$ 1 046	$ 2 747	$ - 500

Macon, Logan, McLean, Piatt and Tazewell Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 53 farms	18 most profitable farms	18 least profitable farms
Size of farm - acres		243.6	246.4	234.5
Percent of land area tillable	%	92.9 %	92.2 %	92.8 %
Acres in Corn		108.0	106.9	107.7
Oats		45.8	46.3	38.4
Wheat		13.1	14.2	8.2
Soybeans		13.5	18.0	10.5
Crop yields - Corn, bu. per acre		46.9	53.6	39.8
Oats, bu. per acre		44.0	44.4	42.6
Wheat, bu. per acre		18.0	18.5	16.0
Soybeans, bu. per acre		20.3	23.0	14.0
Returns per $100 of feed fed to productive livestock		144	192	121
Returns per $100 invested in all productive livestock		133	159	115
For $100 in Cattle		112	134	103
Hogs		158	193	135
Poultry		190	221	162
Investment in productive livestock per acre		8.64	8.32	10.35
Receipts from productive livestock per acre		11.46	13.25	11.91
Man labor cost per acre		6.18	6.06	6.25
Crop acres per man		101.6	104.1	100.9
Crop acres per horse (with tractor)		29.5	30.5	27.5
(without tractor)		20.7	21.3	19.7
Expenses per $100 gross income		50	39	67
Machinery cost per acre		2.10	1.77	2.48
Farm improvements cost per acre		.82	.53	.93
Gross receipts per acre		25.65	31.50	19.64
Total expenses per acre		12.90	12.21	13.25
Net receipts per acre		12.75	19.29	6.39
Farms with tractor		77.4 %	72.2 %	72.2 %
Value of land per acre		180	174	185
Total investment per acre		226	219	231

Find Your Farm Leaks

Macon, Logan, McLean, Piatt and Tazewell Counties, 1928

he numbers between the lines across the middle of the page are the approximate averages for your section of the state f the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
arned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12.6	68	65	32	182	298	330	22.64	25.46	2.70	140	44	34	15	46	380
11.6	65	62	30	172	278	310	20.64	23.46	3.20	135	42	32	20	43	360
10.6	62	59	28	162	258	290	18.64	21.46	3.70	130	40	30	25	40	340
9.6	59	56	26	152	238	270	16.64	19.46	4.20	125	38	28	30	37	320
8.6	56	53	24	142	218	250	14.64	17.46	4.70	120	36	26	35	34	300
7.6	53	50	22	132	198	230	12.64	15.46	5.20	115	34	24	40	31	280
6.6	50	47	20	122	178	210	10.64	13.46	5.70	105	32	22	45	28	260
5.6	47	44	18	112	158	190	8.64	11.46	6.20	100	30	20	50	25	240
4.6	44	41	16	102	138	170	6.64	9.46	6.70	95	28	18	55	22	220
3.6	41	38	14	92	118	150	4.64	7.46	7.20	90	26	16	60	19	200
2.6	38	35	12	82	98	130	2.64	5.46	7.70	85	24	14	65	16	180
1.6	35	32	10	72	78	110	0.64	3.46	8.20	80	22	12	70	13	160
0.6	32	29	8	62	58	90	----	1.46	8.70	75	20	10	75	10	140
-0.4	29	26	6	52	38	70	----	----	9.20	70	18	8	80	7	120
-1.4	26	23	4	42	18	50	----	----	9.70	65	16	6	85	4	100

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FORD AND IROQUOIS COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-four Farms

for

1928

The farm account
is a guide to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May 1929

M-111

ANNUAL FARM BUSINESS REPORT

Ford and Iroquois Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 34 farmers in Ford and Iroquois Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $597, there remains a rate of 5 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1,282. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $562 left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $185 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $231 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent on the total farm investment higher than on the average of all farms in the same locality. We, therefore, would estimate that the average Ford and Iroquois County farmer earned about 4 percent on his investment for 1928 to pay for use of capital, risk and management.

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*G. T. Swaim and C. E. Johnson, farm advisers in Ford and Iroquois Counties respectively cooperated in supervising and collecting the records used in this report.

Farm earnings vary widely from year to year, and 1928 was the best year for these counties since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. For other industries just as for farming no records are available for the average of all companies. The companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers have succeeded better than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $3,762 larger net incomes than the third which were least successful.

The 11 most profitable farms averaged 25 acres larger than the 11 least profitable farms. This larger size gave a slight advantage in securing more efficient use of labor, equipment and improvements but this was a factor of minor importance. The difference in gross income per acre and in volume of business done was much greater than the difference in acres farmed. Of the 25 additional acres on the more successful farms 21 acres were in corn.

One of the chief advantages of the more profitable farms was in larger crop yields. They produced 8 bushels more corn, 4 bushels more oats, 20 bushels more barley, and 4 bushels more soybeans per acre than was produced on the less profitable farms. Figured on their entire acreage this gave the more profitable farms 2,180 bushels more grain per farm. This very largely went to swell the net income since it costs little more to produce an acre of high yielding crop than an acre of low yielding crop under ordinary conditions.

Another advantage of the 11 most successful farm operators was due to their greater efficiency in handling and feeding livestock. For every $100 worth of feed fed they realized an income of $132 while the 11 least successful operators realized a corresponding income of $121. Altho Ford and Iroquois Counties are typical of the corn and oat selling section of east-central Illinois, livestock enterprises contributed 39 percent of the gross income on farms included in this report. An advantage of $11 more income from each $100 worth of feed was therefore of considerable importance in raising net incomes on the 11 most profitable farms. The data indicate that the cattle, hog and poultry enterprises all shared in the greater livestock efficiency on the more successful farms. Hogs being the largest livestock enterprise apparently had the largest share. These farms also had a little more livestock per acre than the less successful farms which coupled with better than average efficiency was an additional advantage. The account keeping farms of this area show only about half as much investment in livestock per acre as is found on the account keeping farms of western Illinois. It seems evident that the farmers whose records are included in this report have more livestock than is found on the average farm in Ford and Iroquois Counties. The 11 most profitable farms had an average of 7 cows and 12 brood sows per farm while the 11 least profitable farms

averaged 6 cows and 5 brood sows. The more successful operators sold dairy products to the amount of $135 a cow while the less successful operators sold only $70 a cow.

There were only small differences between the two groups of farms in the expense per acre for labor, equipment, and improvements. In fact, there was a difference of only $1.47 an acre in total operating expense. The big difference between them was in income and not in expense. The largest opportunities for the average farmer appear to be in so using the factors of cost as to produce a larger income rather than in making large reductions in operating costs.

The following table gives an interesting comparison of farm earnings and investments on account-keeping farms in Ford and Iroquois Counties for the last four years. It is evident that average earnings were better for 1928 than for the three preceding years. Earlier records for Ford County indicate that 1924 was at least the equal of 1928, but these two years were outstandingly the best years for farm earnings in this section since 1919.

Comparative Earnings on Farms in Ford and Iroquois County District, 1925 to 1928

Item	1925[1]	1926	1927	1928
Number of farm records	31	31	28	34
Average size of farm, acres	251	231	233	259
Average rate earned	2.5%	3.9%	4.1%	6.0%
Average value of land per acre	$ 200	$ 199	$ 195	$ 185
Average investment per acre	253	245	244	231
Investment in livestock per farm	2 461	2 181	2 549	2 526
Investment in cattle per farm	734	778	767	1 057
Investment in hogs per farm	581	484	730	522
Investment in poultry per farm	165	184	182	191
Gross income per acre	17.45	20.96	21.83	25.17
Operating costs per acre	11.12	11.39	11.72	11.36
Crop income less feed purchases per farm	2 293	2 819	2 945	3 929
Miscellaneous income per farm	66	73	47	72
Livestock income per farm	2 032	1 953	2 104	2 518
Gross income per farm	4 391	4 845	5 096	6 519
Cattle income per farm	327	228	421	401
Dairy sales per farm	327	391	460	656
Hog income per farm	1 003	966	855	1 035
Poultry income per farm	302	330	307	365

[1]The records were from Ford County only for 1925.

Some points of strength and some of weakness may be found in your business by comparing the factors from your own record in the following tables with the same factors on the average farm as well as with those for the farms in the high and low profit groups.

Ford and Iroquois Counties - 1928

Item	Your farm	Average of 34 farms	Eleven most profitable farms	Eleven least profitable farms
Capital Investments - Total	$	$59 741	$63 241	$52 315
Land		47 847	50 191	42 481
Farm improvements		4 926	5 433	3 890
Machinery and equipment		1 571	1 504	1 606
Feed, grain and supplies		2 871	3 646	2 064
Livestock - Total		2 526	2 467	2 274
Horses		690	575	726
Cattle		1 057	1 124	973
Hogs		522	481	363
Sheep		49	58	27
Poultry		191	178	185
Bees		17	51	--
Receipts - Net Increases - Total	$	$ 6 519	$ 8 288	$ 4 623
Feed, grain and supplies		3 929	4 999	2 936
Labor off the farm		63	130	46
Miscellaneous		9	--	5
Livestock - Total		2 518	3 159	1 636
Horses		---	---	---
Cattle		401	369	344
Hogs		1 035	1 246	660
Sheep		60	68	51
Poultry		148	239	56
Egg sales		217	286	103
Dairy sales		656	947	422
Bees		1	4	-
Expenses - Net Decreases - Total	$	$ 1 993	$ 1 843	$ 1 992
Farm improvements		263	238	237
Machinery and equipment		466	447	495
Feed, grain and supplies		---	---	---
Misc. livestock expense		41	36	46
Miscellaneous crop expense		243	240	250
Hired labor		495	410	485
Taxes, insurance, etc.		457	440	417
Miscellaneous expenses		24	23	21
Horses - decreases		1	9	41
Miscellaneous livestock decreases		-	-	-
Receipts less expenses	$	$ 4 526	$ 6 445	$ 2 631
Total unpaid labor		949	990	938
Operator's labor		692	698	671
Family labor		257	292	267
Net income from investment and management		3 577	5 455	1 693
Rate earned on investment	%	5.99%	8.63%	3.24%
Income left before paying for operator's labor		4 269	6 153	2 364
5 percent of Capital Invested		2 937	3 152	2 616
Labor and management wage	$	$ 1 232	$ 2 901	$ - 252

Ford, Iroquois Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 34 farms	11 most profitable farms	11 least profitable farms
Size of farm - acres		259	270	245
Percent of land area tillable		94%	93%	92%
Acres in Corn		111	125	104
Oats		61	63	63
Wheat		14	9	10
Barley		7	4	10
Soybeans		7	9	6
Crop yields - Corn, bu. per acre		46	49	41
Oats, bu. per acre		37	37	33
Wheat, bu. per acre		17	17	16
Barley, bu. per acre		25	37	17
Soybeans, bu. per acre		22	24	20
Return per $100 of feed fed to productive livestock		134	132	121
Returns per $100 invested in all productive livestock		135	155	105
For $100 in Cattle		96	111	76
Hogs		200	226	180
Poultry		194	262	102
Investment in productive livestock per acre		7.22	7.57	6.38
Receipts from productive livestock per acre		9.72	11.70	8.68
Man labor cost per acre		5.58	5.18	5.81
Crop acres per man		115.2	120.5	109.1
Crop acres per horse (with tractor)		33.0	34.6	32.8
(without tractor)		23.4	23.8	25.5
Expenses per $100 gross income		45	34	63
Machinery cost per acre		1.80	1.66	2.02
Farm improvements cost per acre		1.02	.83	.97
Gross receipts per acre		25.17	30.70	18.87
Total expenses per acre		11.36	10.49	11.96
Net receipts per acre		13.81	20.21	6.91
Farms with tractor		74%	73%	82%
Value of land per acre		185	186	173
Total investment per acre		231	234	214

Find Your Farm Leaks

Ford and Iroquois Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse Tractor	Horse No tractor			
13.0	67	58	31	166	340	334	14.25	16.75	2.00	150	47	37	10	46	400
12.0	64	55	29	156	320	314	13.25	15.75	2.50	145	45	35	15	43	380
11.0	61	52	27	146	300	294	12.25	14.75	3.00	140	43	33	20	40	360
10.0	58	49	25	136	280	274	11.25	13.75	3.50	135	41	31	25	37	340
9.0	55	46	23	126	260	254	10.25	12.75	4.00	130	39	29	30	34	320
8.0	52	43	21	116	240	234	9.25	11.75	4.50	125	37	27	35	31	300
7.0	49	40	19	106	220	214	8.25	10.75	5.00	120	35	25	40	28	280
6.0	46	37	17	96	200	194	7.25	9.75	5.50	115	33	23	45	25	260
5.0	43	34	15	86	180	174	6.25	8.75	6.00	110	31	21	50	22	240
4.0	40	31	13	76	160	154	5.25	7.75	6.50	105	29	19	55	19	220
3.0	37	28	11	66	140	134	4.25	6.75	7.00	100	27	17	60	16	200
2.0	34	25	9	56	120	114	3.25	5.75	7.50	95	25	15	65	13	180
1.0	31	22	7	46	100	94	2.25	4.75	8.00	90	23	13	70	10	160
0.0	28	19	5	36	80	74	1.25	3.75	8.50	85	21	11	75	7	140
-0.0	25	16	3	26	60	54	--	2.75	9.00	80	19	9	80	4	120

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

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and

CHAMPAIGN AND VERMILION COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-six Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May 1929

M-112

ANNUAL FARM BUSINESS REPORT

Champaign and Vermilion Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 36 farmers in Champaign and Vermilion Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6.2 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $468, there remains a rate of 5.2 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1270. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $550 left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $173 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $218 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Champaign and Vermilion County farmer earned about 4.2 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for these counties since 1924, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank.

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*C. C. Burns and Otis Kercher, farm advisers in Champaign and Vermilion Counties, respectively, cooperated in supervising and collecting the records used in this report.

These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2577 larger net incomes than the third which were least successful.

The 12 most profitable farms averaged 66 acres larger than the 12 least profitable farms. This larger size gave some advantage in volume of gross income. It also gave the more successful operators an opportunity to use labor, power, equipment and improvements to a better advantage since there were more acres and a larger volume of business over which to spread these items of cost. Nearly half of the extra acreage on the more profitable farms was in corn.

The fact that they produced larger crop yields was an important advantage to the 12 most profitable farms. The average difference in yield for the different crops was not so large as it has been some years but even small advantages in yield, coupled with larger acreage, gave these farms 2514 bushels more grain per farm than was produced on the 12 least profitable farms.

Altho the farms covered by this report had only about half as much livestock per acre as is commonly found on farms of western Illinois, efficiency in handling livestock was an important factor in determining net earnings. The 12 most profitable farms secured $184 of livestock income for each $100 worth of feed fed while the 12 least profitable farms secured a corresponding income of $160. These figures indicate a fair degree of success by both groups in handling and feeding livestock but it is the margin above cost which counts in net income and this margin was much wider on the more profitable farms. It should be noted that the income from a given amount of feed fed must cover not only the value of the feed but other items of cost in producing livestock, such as labor, pasture, shelter, interest on the investment in livestock, and other minor items. The more successful farm operators show a higher efficiency with all classes of livestock but their biggest advantage in income came from the cattle enterprise. It is commonly expected that larger farms will carry less livestock per acre but in this case the 12 most profitable farms altho averaging 66 acres larger had practically the same investment per acre in livestock as did the 12 least profitable farms and they secured nearly two dollars an acre more income from livestock.

Costs per acre for labor, equipment and improvements were somewhat lower on the more successful farms. With about the same amount of livestock per acre the 12 most successful farm operators farmed 22 more crop acres per man. These advantages were favored by larger size of farm but other similar studies indicate that such factors as crop rotation, size and arrangement of fields and planning of work are important in securing greater efficiency with labor, power and equipment.

The situation on these farms is summed up in the income and expense per acre. The 12 most profitable farms with larger crop yields, more livestock income and lower costs per acre realized twice as much net income per acre as the 12 least profitable farms. The gross incomes were $29.58 and $23.63 an acre with expenses of $12.39 and $15.08 an acre for the more and the less successful farms respectively.

The following table presents an interesting comparison of earnings and investments on farms of the Champaign County district enrolled in the farm accounting project for the years from 1924 to 1928. The season of 1928 was clearly the most favorable one since 1924 and other records indicate that 1924 was much the most favorable one for this section since 1919. A few dairy farms in Vermilion County were included for 1928, which probably had some effect in increasing the average investment in cattle and the income from dairy sales. This report checks very closely, however, with other 1928 reports for areas in east central Illinois on average rate earned on the investment.

	1924[1]	1925[2]	1926[2]	1927[2]	1928
Number of farm records	52	30	30	30	36
Average size of farm in acres	223	214	225	229	215
Average rate earned	7.4%	3.5%	4.1%	4.4%	6.2%
Average value of land per acre	$ 198	$ 201	$ 203	$ 208	$ 173
Average investment per acre	242	251	246	255	218
Investment in livestock per farm	2,210	1,654	1,949	2,243	2,259
Investment in cattle per farm	675	572	656	653	917
Investment in hogs per farm	548	256	318	352	472
Investment in poultry per farm	151	148	203	161	151
Gross income per acre	29.44	20.67	22.50	23.05	25.96
Operating cost per acre	11.43	11.82	12.42	11.92	12.51
Crop income less feed purchases per farm	4,620	2,341	3,379	3,651	3,242
Miscellaneous income per farm	83	115	74	48	109
Livestock income per farm	1,873	1,482	1,609	1,580	2,231
Gross income per farm	6,576	4,438	5,062	5,279	5,582
Cattle income per farm	358	182	196	257	503
Dairy income per farm	268	371	317	442	518
Hog income per farm	886	309	724	513	877
Poultry income per farm	233	287	356	318	301

[1] Records for Champaign and Ford Counties and the eastern part of McLean County were included for 1924.

[2] Records for Champaign County only for 1925, 1926 and 1927.

Some points of strength and some of weakness in your farm business may be found by comparing the factors from your own record in the following tables with the same factors on the average farm as well as on farms of the high and low profit groups.

Champaign, Vermilion Counties - 1928

Item	Your farm	Average of 36 farms	Twelve most profitable farms	Twelve least profitable farms
Capital Investments - Total	$	$46 819	$47 931	$40 950
Land		37 238	37 798	31 712
Farm improvements		3 275	3 179	3 671
Machinery and equipment		1 471	1 535	1 360
Feed, grain and supplies		2 576	2 956	2 279
Livestock - Total		2 259	2 463	1 928
Horses		684	671	710
Cattle		917	1 114	630
Hogs		472	526	364
Sheep		32	30	27
Poultry		151	122	188
Bees		3	--	9
Receipts - Net Increases - Total	$	$ 5 582	$ 6 893	$ 3 947
Feed, grain and supplies		3 242	3 948	2 241
Labor off the farm		103	152	18
Miscellaneous		6	5	4
Livestock - Total		2 231	2 788	1 684
Horses		---	---	---
Cattle		503	973	222
Hogs		877	951	707
Sheep		32	57	16
Poultry		150	127	178
Egg sales		151	149	196
Dairy sales		518	531	364
Bees		---		1
Expenses - Net Decreases - Total	$	$ 1 789	$ 1 959	$ 1 677
Farm improvements		177	171	217
Machinery and equipment		410	426	383
Feed, grain and supplies		---	---	---
Misc. livestock expense		43	44	44
Miscellaneous crop expense		230	230	272
Hired labor		451	607	314
Taxes, insurance, etc.		419	408	390
Miscellaneous expenses		31	30	32
Horses - decreases		28	43	25
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 3 793	$ 4 934	$ 2 270
Total unpaid labor		901	929	842
Operator's labor		719	716	720
Family labor		182	213	122
Net income from investment and management		2 892	4 005	1 428
Rate earned on investment	%	6.18%	8.36%	3.49%
Income left before paying for operator's labor		3 611	4 721	2 148
5 percent of Capital Invested		2 341	2 397	2 048
Labor and management wage	$	$ 1 270	$ 2 324	$ 100

Champaign, Vermilion Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 36 farms	Twelve most profitable farms	Twelve least profitable farms
Size of farm - acres		215	233	167
Percent of land area tillable		92%	87%	94%
Acres in Corn		90	98	68
Oats		45	45	37
Wheat		4	5	.2
Barley		7	7	7
Soybeans		13	17	5
Crop yields - Corn, bu. per acre		48	51	47
Oats, bu. per acre		41	41	42
Wheat, bu. per acre		14	20	16
Barley, bu. per acre		21	23	21
Soybeans, bu." acre		22	25	23
Returns per $100 of feed fed to productive livestock	———	184	184	160
Returns per $100 invested in all productive livestock		141	158	134
For $100 in Cattle		110	133	89
Hogs		189	201	186
Poultry		193	219	197
Investment in productive livestock per acre	———	7.37	7.57	7.53
Receipts from productive livestock per acre		10.38	11.95	10.08
Man labor cost per acre	———	6.29	6.59	6.92
Crop acres per man		100.5	105.3	83
Crop acres per horse (with tractor)		31.0	32.0	27
(without tractor)		17.0	17.5	16
Expenses per $100 gross income	———	48	42	64
Machinery cost per acre		1.91	1.83	2.29
Farm improvements cost per acre		.82	.73	1.30
Gross receipts per acre	———	25.96	29.58	23.63
Total expenses per acre		12.51	12.39	15.08
Net receipts per acre		13.45	17.19	8.55
Farms with tractor	———	71%	82%	50%
Value of land per acre		173	162	190
Total investment per acre		218	206	245

Find Your Farm Leaks

Champaign and Vermilion Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
13.2	69	62	28	180	329	333	14.37	17.38	2.80	135	45	31	13	47	355
12.2	66	59	26	170	309	313	13.37	16.38	3.30	130	43	29	18	44	335
11.2	63	56	24	160	289	293	12.37	15.38	3.80	125	41	27	23	41	315
10.2	60	53	22	150	269	273	11.37	14.38	4.30	120	39	25	28	38	295
9.2	57	50	20	140	249	253	10.37	13.38	4.80	115	37	23	33	35	275
8.2	54	47	18	130	229	233	9.37	12.38	5.30	110	35	21	38	32	255
7.2	51	44	16	120	209	213	8.37	11.38	5.80	105	33	19	43	29	235
6.2	48	41	14	110	189	193	7.37	10.38	6.30	100	31	17	48	26	215
5.2	45	38	12	100	169	173	6.37	9.38	6.80	95	29	15	53	23	195
4.2	42	35	10	90	149	153	5.37	8.38	7.30	90	27	13	58	20	175
3.2	39	32	8	80	129	133	4.37	7.38	7.80	85	25	11	63	17	155
2.2	36	29	6	70	109	113	3.37	6.38	8.30	80	23	9	68	14	135
1.2	33	26	4	60	89	93	2.37	5.38	8.80	75	21	7	73	11	115
0.2	30	23	-	50	69	73	1.37	4.38	9.30	70	19	5	78	8	95
-0.8	27	20	-	40	49	53	----	3.38	9.80	65	17	3	83	5	75

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

DOUGLAS AND COLES COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May 1929

M-121

ANNUAL FARM BUSINESS REPORT

Douglas and Coles Counties, Illinois, 1928

Prepared by R. R. Hudelson, F. L. Underwood, and H. C. M. Case*

The 30 farmers in Douglas and Coles Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $478, there remains a rate of 4 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $630. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is nothing left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuations on which the investment is computed. The average value of the land included in this report was placed at $160 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $205 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Douglas and Coles County farmer earned about 3 percent on his investment for 1928 to pay for use of capital, risk, and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Douglas and Coles Counties since 1924, but these earnings were low as compared with

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*F. W. Garrett and Melvin Thomas, farm advisers in Douglas and Coles Counties respectively, cooperated in supervising and collecting the records used in this report.

other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2,755 larger net incomes than the third which were least successful.

There was a difference of only 11 acres in average size of farm between the 10 most profitable and the 10 least profitable farms. The more profitable farms however, had a higher percentage of tillable land which gave them an average of 44 more acres of possible crop land. Most of this extra acreage was in corn and oats, both of which produced fairly good yields for 1928.

The largest single advantage of the 10 most profitable farms was that of higher crop yields. They produced 10 bushels more corn, 10 bushels more oats, 9 bushels more wheat, and 3 bushels more soybeans per acre than the 10 least profitable farms. These higher yields figured on the entire acreage gave the more successful farms an average of 2,941 bushels more grain than the less successful farms. This larger production was realized with very little larger cost per acre.

The second largest advantage of the more successful farm operators was in their higher efficiency in handling and feeding livestock. For every $100 worth of feed fed they secured a livestock income of $134 while the less successful operators had a corresponding income of only $106. The income from feed fed to livestock must cover other items of cost such as labor, pasture, shelter, interest, etc. It is evident that the 10 least profitable farms with only $106 income from each $100 worth of feed were not realizing a profit on their livestock enterprises. The more successful farmers show a greater efficiency for each class of livestock separately as indicated by the income per $100 invested in cattle, hogs, and poultry.

Labor and equipment costs per acre were slightly higher on the more profitable farms but their larger crop yields and more efficient livestock production more than paid for these moderate increases in cost.

The situation is summed up in the figures showing gross income and expense per acre. The 10 most profitable farms produced a gross income per acre of $28.39 at an expense of $12.72. The corresponding figures for the 10 least profitable farms were $14.54 income and $11.23 expense. The more successful operators therefore had almost twice the income with only $1.49 more expense per acre.

The following table shows an interesting comparison of income and investment figures on account-keeping farms in the Douglas and Coles County district during the last five years. Earnings were a little better for 1928 than for any other year since 1924. These farms show a fairly constant income from livestock enterprises but on the average they produce a surplus of crops to sell and on years of fair to good yield this surplus is larger. The crop income also tends to move up and down with the prevailing price of grains. Grain prices were higher in 1924 due to a world shortage of wheat and a national shortage of corn.

Comparative Earnings on Douglas and Coles County Farms

Item	1924[1]	1925[2]	1926[3]	1927[4]	1928
Number of farms included.....	32	30	39	40	30
Average size of farm in acres....	200	184	196	218	233
Average rate earned.....	8.2%	4.2%	4.2%	3.3%	5.0%
Average value of land per acre...	$164	$185	$176	$154	$160
Average investment per acre.....	202	243	224	200	205
Investment in livestock per farm.	1 909	2 384	2 013	2 399	2 645
Investment in cattle per farm....	696	920	785	738	955
Investment in hogs per farm.....	408	784	585	892	760
Investment in poultry per farm...	105	144	127	139	112
Gross income per acre.....	27.64	22.03	21.92	18.61	22.33
Operating cost per acre.....	11.06	11.98	12.42	11.91	12.03
Crop income less feed purchases per farm.....	3 503	974	1 970	1 402	2 727
Miscellaneous income per farm....	66	67	52	47	68
Livestock income per farm.....	1 959	3 023	2 287	2 605	2 417
Cattle income per farm.....	292	546	368	610	602
Dairy income per farm.....	338	416	237	310	242
Hog income per farm.....	1 122	1 769	1 414	1 402	1 217
Poultry income per farm.....	172	271	220	207	265
Gross income per farm.....	5 528	4 064	4 309	4 054	5 212

[1]Records from Coles, Douglas, Moultrie and Clark Counties included.

[2]Only Coles County records included.

[3]Records from Coles and Douglas Counties included.

[4]Records from Douglas, Coles, Vermilion and Clark Counties included.

Some points of strength and some of weakness in your own business may be found by comparing the factors from your own record in the following tables with the same factors on the average farm and with those farms of the more profitable and less profitable group.

Douglas and Coles Counties - 1928

Item	Your farm	Average of 30 farms	Ten most profitable farms	Ten least profitable farms
Capital Investments - Total	$_____	$47 828	$47 757	$34 591
Land		37 352	38 430	26 236
Farm improvements		4 138	3 346	3 785
Machinery and equipment		1 613	1 649	1 156
Feed, grain and supplies		2 080	1 882	1 176
Livestock - Total	_____	2 645	2 400	2 238
Horses		535	482	473
Cattle		955	924	608
Hogs		760	811	648
Sheep		283	59	391
Poultry		112	124	118
Receipts - Net Increases - Total	$_____	$ 5 212	$ 6 245	$ 3 041
Feed, grain and supplies		2 727	3 463	1 155
Labor off the farm		62	82	40
Miscellaneous		6	5	8
Livestock - Total	_____	2 417	2 695	1 838
Horses		5	18	--
Cattle		602	644	242
Hogs		1 217	1 330	989
Sheep		86	60	83
Poultry		132	140	163
Egg sales		133	157	126
Dairy sales		242	346	235
Expenses - Net Decreases - Total	$_____	$ 1 961	$ 1 811	$ 1 533
Farm improvements		208	183	183
Machinery and equipment		379	369	323
Feed, grain and supplies		---	---	---
Misc. livestock expense		39	37	37
Miscellaneous crop expense		310	326	259
Hired labor		571	472	381
Taxes, insurance, etc.		432	404	364
Miscellaneous expenses		22	20	29
Horses - decreases		--	--	7
Miscellaneous livestock decreases _____		--	--	--
Receipts less expenses	$_____	$ 3 251	$ 4 434	$ 1 458
Total unpaid labor		848	987	766
Operator's labor		668	720	672
Family labor		180	267	94
Net income from investment and management	_____	2 403	3 447	692
Rate earned on investment	_____%	5.02%	7.22%	2.00%
Income left before paying for operator's labor		3 071	4 167	1 364
5 percent of Capital Invested		2 391	2 388	1 730
Labor and management wage	$_____	$ 680	$ 1 779	$ - 366

Douglas and Coles Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 30 farms	Ten most profitable farms	Ten least profitable farms
Size of farm - acres		233.4	220.0	209.2
Percent of land area tillable		90.8%	96.3%	80.4%
Acres in Corn		91.3	87	65.2
Oats		43.4	47	27.8
Wheat		8.8	6	15.1
Soybeans		22.3	21	24.6
Crop yields - Corn, bu. per acre		48.5	51.0	40.6
Oats, bu. per acre		46.9	49.2	39.5
Wheat, bu. per acre		12.1	20.0	11.4
Soybeans, bu. per acre		19.0	18.3	15.3
Returns per $100 of feed fed to productive livestock		107	134	106
Returns per $100 invested in all productive livestock		124	145	111
For $100 in Cattle		94	111	68
Hogs		161	172	163
Poultry		224	240	231
Investment in productive livestock per acre		8.36	8.41	7.94
Receipts from productive livestock per acre		10.34	12.17	8.79
Man labor cost per acre		6.08	6.63	5.48
Crop acres per man		98.4	98.4	97.3
Crop acres per horse (with tractor)		32.3	32.4	30.3
(without tractor)		18.7	25.1	16.2
Expenses per $100 gross income		54.00	45.00	77.00
Machinery cost per acre		1.62	1.68	1.54
Farm improvements cost per acre		.89	.83	.87
Gross receipts per acre		22.33	28.39	14.54
Total expenses per acre		12.03	12.72	11.23
Net receipts per acre		10.30	15.67	3.31
Farms with tractor		80.0%	90.0%	70.0%
Value of land per acre		160	175	125
Total investment per acre		205	217	165

Douglas and Coles Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12.0	69	68	26	164	301	364	22.36	24.34	2.50	135	46	32	20	43	370
11.0	66	65	24	154	281	344	20.36	22.34	3.00	130	44	30	25	40	350
10.0	63	62	22	144	261	324	18.36	20.34	3.50	125	42	28	30	37	330
9.0	60	59	20	134	241	304	16.36	18.34	4.00	120	40	26	35	34	310
8.0	57	56	18	124	221	284	14.36	16.34	4.50	115	38	24	40	31	290
7.0	54	53	16	114	201	264	12.36	14.34	5.00	110	36	22	45	28	270
6.0	51	50	14	104	181	244	10.36	12.34	5.50	105	34	20	50	25	250
5.0	48	47	12	94	161	224	8.36	10.34	6.00	100	32	18	55	22	230
4.0	45	44	10	84	141	204	6.36	8.34	6.50	95	30	16	60	19	210
3.0	42	41	8	74	121	184	4.36	6.34	7.00	90	28	14	65	16	190
2.0	39	38	6	64	101	164	2.36	4.34	7.50	85	26	12	70	13	170
1.0	36	35	4	54	81	144	----	2.34	8.00	80	24	10	75	10	150
0.0	33	32	2	44	61	124	----	----	8.50	75	22	8	80	7	130
-1.0	30	29	-	34	41	104	----	----	9.00	70	20	6	85	4	110
-2.0	27	26	-	24	21	84	----	----	9.50	65	18	4	90	-	90

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

CLARK, CRAWFORD, CHRISTIAN, SHELBY and CUMBERLAND

COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Forty-seven Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May, 1929

M-124

ANNUAL FARM BUSINESS REPORT

Clark, Crawford, Christian, Shelby, and Cumberland Counties, Illinois, 1928

Prepared by R. R. Hudelson, F. L. Underwood, and H. C. M. Case*

The 47 farmers in the above named counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 3 percent on their investments. A wage of $50 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $258, there remains a rate of 2 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $72. If it is assumed that the labor performed by the operator is worth $50 a month or $600 a year, there is nothing left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $86 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $125 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these counties earned about 1 percent on his investment for 1928 to pay for use of capital, risk and management.

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*R. E. Apple, J. Z. Frazier, T. H. Brock, H. M. Adams and G. O. Standley, farm advisers in Clark, Crawford, Christian, Shelby, and Cumberland Counties, respectively, cooperated in supervising and collecting the records used in this report.

Farm earnings vary widely from year to year, and these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2082 larger net incomes than the third which were least successful.

Difference in size of farm was not a factor in determining the difference in income between the 16 most profitable and the 16 least profitable farms since both groups averaged the same number of acres per farm and practically the same percentage of tillable land. They also had close to the same acreage of the more common crops.

The biggest single advantage of the more successful farms was larger crop yields. These farms produced 18 bushels more corn, 4 bushels more oats, and 18 bushels more wheat per acre than the less successful farms, although the latter group averaged 7½ bushels more soybeans per acre. Figured on the entire acreage this gave the 16 most profitable farms an average of 1910 bushels more grain than the 16 least profitable farms. They, therefore, had a surplus of crops worth $1465 a farm while the average farmer in the less successful group spent $596 more for feed than his crop income amounted to.

The second greatest advantage of the most successful farm operators was in handling and feeding livestock more efficiently. They had a little less livestock per acre as shown by a livestock investment of $7.76 an acre compared with $9.44 for the less successful group. That their efficiency was higher is shown by the fact that they realized a livestock income of $153 for each $100 worth of feed fed while the less successful operators had a corresponding income of only $116 for each $100 worth of feed fed. Since livestock income must meet other costs than feed including such items as labor, pasture, shelter, interest, etc. it is evident that livestock enterprises did not pay very well on the 16 least profitable farms. The conclusion as to the greater efficiency of livestock on the more successful farms is borne out by the figures showing returns per $100 invested in hogs and cattle and in all productive livestock taken together.

On the expense side of the business the 16 most profitable farms show slightly higher costs for labor but they had slightly lower costs for machinery

and equipment and they bought much less feed.

The situation is summed up in the figures showing gross income and expense per acre. With an expense of $10.58 the more profitable farms produced an income of $19.40 an acre compared with an expense of $13.51 and an income of $11.98 an acre on the least profitable farms. This resulted in a net income of $8.82 and a net loss of $1.53 an acre respectively for the two groups.

The area covered by this report has been covered in several separate reports for other years and no direct comparison of farm earnings in 1928 with previous years can be made. It appears, however, that while average earnings were low for 1928 they were slightly higher than for 1927.

Clark, Crawford, Christian, Shelby, Cumberland Counties - 1928

Item	Your farm	Average of 47 farms	16 most profitable farms	16 least profitable farms
Capital Investments - Total	$_____	$25 848	$23 567	$22 519
Land		17 692	16 160	14 599
Farm improvements		3 513	3 179	3 406
Machinery and equipment		1 245	1 090	1 211
Feed, grain and supplies		1 281	1 329	1 302
Livestock - Total	_____	2 117	1 809	2 001
Horses		365	330	335
Cattle		857	718	776
Hogs		623	517	628
Sheep		98	55	77
Poultry		167	182	171
Bees		7	7	14
Receipts - Net Increases - Total	$_____	$ 3 001	$ 3 904	$ 2 409
Feed, grain and supplies		307	1 465	----
Labor off the farm		68	126	13
Miscellaneous		4	3	3
Livestock - Total	_____	2 622	2 310	2 393
Horses		---	1	---
Cattle		661	439	466
Hogs		1 132	1 032	1 157
Sheep		68	45	49
Poultry		125	127	129
Egg sales		242	242	290
Dairy sales		390	420	294
Bees		4	4	8
Expenses - Net Decreases - Total	$_____	$ 1 407	$ 1 397	$ 1 890
Farm improvements		174	141	196
Machinery and equipment		364	301	334
Feed, grain and supplies		---	---	596
Misc. livestock expense		46	23	33
Miscellaneous crop expense		189	216	187
Hired labor		326	436	194
Taxes, insurance, etc.		272	263	278
Miscellaneous expenses		20	17	22
Horses - decreases		16	--	50
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$_____	$ 1 594	$ 2 507	$ 519
Total unpaid labor		831	732	826
Operator's labor		608	600	586
Family labor		223	132	240
Net income from investment and management	_____	763	1 775	- 307
Rate earned on investment	_____%	2.95%	7.53%	-1.36%
Income left before paying for operator's labor		1 371	2 375	279
5 percent of Capital Invested		1 293	1 178	1 126
Labor and management wage	$_____	$ 78	$ 1 197	$ - 847

Clark, Crawford, Christian, Shelby, Cumberland Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 47 farms	16 most profitable farms	16 least profitable farms
Size of farm - acres		206.4	201.2	201.1
Percent of land area tillable	%	83.6%	84.0%	81.8%
Acres in Corn		63.3	63.3	61.6
Oats		26.4	33.6	17.1
Wheat		5.7	3.4	7.3
Soybeans		15.6	17.3	14.4
Crop yields - Corn, bu. per acre		32.0	40.4	22.4
Oats, bu. per acre		41.5	42.6	38.8
Wheat, bu. per acre		5.4	18.6	.8
Soybeans, bu. per acre		15.5	14.2	21.8
Return per $100 of feed fed to productive livestock		134	153	116
Returns per $100 invested in all productive livestock		142	148	126
For $100 in Cattle		105	104	76
Hogs		197	208	188
Poultry		221	210	248
Investment in productive livestock per acre		8.94	7.76	9.44
Receipts from productive livestock per acre		12.70	11.47	11.90
Man labor cost per acre		5.60	5.80	5.07
Crop acres per man		75.6	79.4	72.6
Crop acres per horse (with tractor)		35.1	34.3	43.0
(without tractor)		18.3	19.9	15.5
Expenses per $100 gross income		78.00	55.00	113.00
Machinery cost per acre		1.76	1.50	1.66
Farm improvements cost per acre		.84	.70	.97
Gross receipts per acre		14.54	19.40	11.98
Total expenses per acre		10.84	10.58	13.51
Net receipts per acre		3.70	8.82	-1.53
Farms with tractor		61.7%	62.5%	50.0%
Value of land per acre		86	80	73
Total investment per acre		125	117	112

Clark, Crawford, Christian, Shelby and Cumberland Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per Man	Crop acres per Horse		Expense per $100 income	Gross receipts per A.	Size of farm
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
10.0	53	62	19	175	337	361	16.00	26.70	2.10	110	49	32	40	36	340
9.0	50	59	17	165	317	341	15.00	24.70	2.60	105	47	30	45	33	320
8.0	47	56	15	155	297	321	14.00	22.70	3.10	100	45	28	50	30	300
7.0	44	53	13	145	277	301	13.00	20.70	3.60	95	43	26	55	27	280
6.0	41	50	11	135	257	281	12.00	18.70	4.10	90	41	24	60	24	260
5.0	38	47	9	125	237	261	11.00	16.70	4.60	85	39	22	65	21	240
4.0	35	44	7	115	217	241	10.00	14.70	5.10	80	37	20	70	18	220
3.0	32	41	5	105	197	221	9.00	12.70	5.60	75	35	18	75	15	200
2.0	29	38	3	95	177	201	8.00	10.70	6.10	70	33	16	80	12	180
1.0	26	35	1	85	157	181	7.00	8.70	6.60	65	31	14	85	9	160
0.0	23	32	--	75	137	161	6.00	6.70	7.10	60	29	12	90	6	140
-1.0	20	29	--	65	117	141	5.00	4.70	7.60	55	27	10	95	3	120
-2.0	17	26	--	55	97	121	4.00	2.70	8.10	50	25	8	100	--	100
-3.0	14	23	--	45	77	101	3.00	--	8.60	45	23	6	105	--	80
-4.0	11	20	--	35	57	81	2.00	--	9.10	40	21	4	110	--	60

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

Sangamon County Farm Bureau

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-eight Farms

for

1928

The farm account is a guide to
more profitable farm management
if its facts are studied and used.

Urbana, Illinois

June, 1929

M-133

ANNUAL FARM BUSINESS REPORT

Sangamon County, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 38 farmers in Sangamon County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $602, there remains a rate of 4 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $676. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is nothing left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $172 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $215 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Sangamon County farmer earned about 3 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was a better year for Sangamon County than 1927, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate

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*Edwin Bay, farm adviser in Sangamon County, cooperated in supervising and collecting the records used in this report.

earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1387 larger net incomes than the third which were least successful..

The 13 most profitable farms averaged 219 acres which was 91 acres smaller than the 13 least profitable farms. It is doubtful whether this difference in size had much if any influence on the difference in net incomes. Both groups were large enough to be organized efficiently. Size of business is more important than number of acres and the more profitable farms produced a larger gross income on a smaller acreage. Gross income is the best measure of size of business. It is interesting to note that the 1927 report for Sangamon County showed a larger average acreage for the more profitable farms. As a rule reports for other areas have shown little difference in size between the more and the less profitable groups of farms.

The more successful farms had some advantage in higher crop yields altho the difference was not so great as is usually found in investigations of this type. The 13 most profitable farms produced about 1 bushel more corn, 6 bushels more oats, 8 bushels more wheat and 2 bushels more soybeans per acre than the 13 least profitable farms. These larger yields were a factor in enabling the more successful farmers to realize about as much crop income in addition to feeding more livestock per acre.

One of the biggest advantages of the more successful farm operators was due to the fact that they had more livestock per acre and handled it more efficiently. They had $2.43 an acre more livestock investment and secured $7.56 an acre more livestock income than the less successful operators. This enabled them to realize more livestock income on considerably less acreage and was a factor in giving these more successful farmers a larger size of business on a smaller size of farm. As evidence of greater livestock efficiency the more profitable farms produced $145 of livestock income for each $100 worth of feed fed as compared with a corresponding income of $123 for each $100 worth of feed fed on the less successful farms. The livestock income must cover other costs besides feed, including such items as labor, pasture, shelter and interest. It is evident that the less successful operators had little income left above these costs and it is this margin above costs which goes to increase profits. These conclusions as to relative efficiency in handling and feeding livestock are further substantiated by the returns per $100 invested in all productive livestock as well as by the returns per $100 invested in cattle, hogs, and poultry separately.

There was no practical difference between the two groups of farms in acre costs for labor or for machinery and equipment. If larger acreage is any advantage it should give the larger farms lower costs for these items. In this case it is evident that the less successful farm operators gained no advantage from their larger size in more efficient use of labor and equipment. They did have a slight advantage in lower costs for improvements which with other small items gave them about $1 an acre less operating expense. The big difference was one of income rather than of expense. Larger yields and more efficient livestock were the chief influences back of the larger gross incomes on the more profitable farms.

The situation is summed up in the figures showing gross income and expense per acre. The 13 most profitable farms had an average gross income of $29.22 with an expense of $12.88 an acre as compared with $18.88 income and $11.82 expense on the 13 least profitable farms. This resulted in net incomes of $16.34 and $7.06 an acre respectively for the two groups.

The following table presents an interesting comparison of income and investment figures on some Sangamon county farms for 1927 and 1928. Larger incomes from crops, cattle, hogs and dairy sales with no increase in expense resulted in considerably better net earnings on these farms. An important factor was that of higher yields of corn and oats with better quality in the case of corn for 1928.

Comparative Earnings on Farms in Sangamon County for 1927 and 1928

Item	1927	1928
Number of farms	26	38
Average size of farms, acres	255	280
Average rate earned, percent	2.8	5.0
Average value of land per acre	$175	$172
Average investment per acre	219	215
Investment in livestock per farm	3090	3409
Investment in cattle per farm	1002	1395
Investment in hogs per farm	1069	1051
Investment in poultry per farm	122	113
Gross income per acre	18.27	22.62
Operating cost per acre	12.12	11.96
Net increase from crops per farm	1284	2091
Miscellaneous income per farm	96	107
Livestock income per farm	3290	4136
Gross income per farm	4670	6334
Cattle income per farm	754	1279
Dairy sales per farm	382	431
Hog income per farm	1859	2098
Poultry income per farm	222	210

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

Sangamon County - 1928

Item	Your farm	Average of 38 farms	13 most profitable farms	13 least profitable farms
Capital Investments - Total	$	$60 237	$47 197	$37 658
Land		48 117	36 347	55 204
Farm improvements		4 596	4 279	4 457
Machinery and equipment		1 654	1 608	1 738
Feed, grain and supplies		2 461	2 022	2 580
Livestock - Total		3 409	2 941	3 679
Horses		674	560	815
Cattle		1 595	1 099	1 470
Hogs		1 051	856	1 176
Sheep		175	353	91
Poultry		113	71	127
Bees		1	2	--
Rabbits		--	--	--
Receipts - Net Increases - Total	$	$ 6 334	$ 6 390	$ 5 848
Feed, grain and supplies		2 091	1 803	1 847
Labor off the farm		100	140	34
Miscellaneous		7	3	11
Livestock - Total		4 136	4 444	3 956
Horses		--	--	5
Cattle		1 279	1 515	1 142
Hogs		2 098	1 999	2 129
Sheep		117	174	92
Poultry		98	81	93
Egg sales		112	65	153
Dairy sales		431	608	342
Bees		1	2	--
Rabbits				
Expenses - Net Decreases - Total	$	$ 2 447	$ 2 046	$ 2 667
Farm improvements		203	175	199
Machinery and equipment		510	388	540
Feed, grain and supplies		--	--	--
Misc. livestock expense		68	63	78
Miscellaneous crop expense		317	291	268
Hired labor		777	629	939
Taxes, insurance, etc.		519	418	615
Miscellaneous expenses		32	40	28
Horses - decreases		21	42	--
Miscellaneous livestock decreases				
Receipts less expenses	$	$ 3 887	$ 4 344	$ 3 181
Total unpaid labor		901	770	994
Operator's labor		702	667	720
Family labor		199	103	274
Net income from investment and management		2 986	3 574	2 187
Rate earned on investment	%	4.96%	7.57%	3.23%
Income left before paying for operator's labor		3 688	4 241	2 907
5 percent of Capital Invested		3 012	2 360	3 383
Labor and management wage	$	$ 676	$ 1 881	$ - 476

Sangamon County - 1928

Factors helping to analyze the farm business	Your farm	Average of 38 farms	13 most profitable farms	13 least profitable farms
Size of farm - acres		279.9	218.7	309.7
Percent of land area tillable	%	88.9%	90.6%	89.6%
Acres in Corn		107.8	91.8	118.6
Oats		41.0	32.8	43.0
Wheat		24.5	12.6	34.6
Soybeans		14.3	12.5	13.5
Crop yields - Corn, bu. per acre		47.2	46.9	46.0
Oats, bu. per acre		47.4	51.8	45.1
Wheat, bu. per acre		17.8	24.6	16.6
Soybeans, bu. per acre		18.8	21.8	20.0
Returns per $100 of feed fed to productive livestock		128	145	123
Returns per $100 invested in all productive livestock		140	166	130
For $100 in Cattle		108	158	92
Hogs		192	212	179
Poultry		177	196	180
Investment in productive livestock per acre		10.56	12.22	9.79
Receipts from productive livestock per acre		14.78	20.32	12.76
Man labor cost per acre		6.00	6.40	5.24
Crop acres per man		97.8	95.8	97.4
Crop acres per horse (with tractor)		32.5	30.7	35.2
(without tractor)		21.1	21.6	22.4
Expenses per $100 gross income		53.00	44.00	63.00
Machinery cost per acre		1.82	1.77	1.74
Farm improvements cost per acre		.73	.81	.64
Gross receipts per acre		22.62	29.22	18.88
Total expenses per acre		11.96	12.88	11.82
Net receipts per acre		10.66	16.34	7.06
Farms with tractor		57.9%	54.0%	38.4%
Value of land per acre		172	166	178
Total investment per acre		215	216	218

Find Your Farm Leaks

Sangamon County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12	68	68	32	178	332	317	24.56	28.78	2.50	135	46	35	18	44	420
11	65	65	30	168	312	297	22.56	26.78	3.00	130	44	33	23	41	400
10	62	62	28	158	292	277	20.56	24.78	3.50	125	42	31	28	38	380
9	59	59	26	148	272	257	18.56	22.78	4.00	120	40	29	33	35	360
8	56	56	24	138	252	237	16.56	20.78	4.50	115	38	27	38	32	340
7	53	53	22	128	232	217	14.56	18.78	5.00	110	36	25	43	29	320
6	50	50	20	118	212	197	12.56	16.78	5.50	105	34	23	48	26	300
5	47	47	18	108	192	177	10.56	14.78	6.00	100	32	21	53	23	280
4	44	44	16	98	172	157	8.56	12.78	6.50	95	30	19	58	20	260
3	41	41	14	88	152	137	6.56	10.78	7.00	90	28	17	63	17	240
2	38	38	12	78	132	117	4.56	8.78	7.50	85	26	15	68	14	220
1	35	35	10	68	112	97	2.56	6.78	8.00	80	24	13	73	11	200
0	32	32	8	58	92	77	----	4.78	8.50	75	22	11	78	8	180
-1	29	29	6	48	72	57	----	2.78	9.00	70	20	9	83	5	160
-2	26	26	4	38	52	37	----	----	9.50	65	18	7	88	-	140

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

Mason, Morgan, Cass, Pike, and Brown County Farm Bureaus

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Sixty-two Farms

for

1928

The farm account is a guide to
more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May, 1929

M-119

ANNUAL FARM BUSINESS REPORT

Mason, Morgan, Cass, Pike and Brown Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 62 farmers in the above named counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5.3 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $418, there remains a rate of 4.3 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $792. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $72 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $128 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $174 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these counties earned about 3.3 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this section since 1925, but these earnings were low as compared with other

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*T. R. Isaacs, F. A. Fisher, G. H. Husted, W. B. Bunn and W. P. Miller, farm advisers in Mason, Morgan, Cass, Pike, and Brown Counties, cooperated in supervising and collecting the records used in this report.

representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $3086 larger net incomes than the third which were least successful.

There was practically no difference in size of farm between the most profitable and the least profitable groups of farms. The 20 most profitable farms did have a higher percentage of tillable land which gave them 34 more acres of possible crop land. A higher percentage of tillable land is an advantage in working out a satisfactory crop and livestock system. It helps especially in making it possible to rotate pastures so as to maintain fertility and good sanitation. Farms with a high percentage of non-tillable land are often unbalanced in that they do not produce enough grain and hay to winter-feed and fatten all of the livestock which can be pastured on the non-tillable land.

One of the chief advantages of the 20 most profitable farms was due to higher crop yields. They produced an average of 12 bushels more corn, 9 bushels more oats, and 8 bushels more wheat per acre than did the 20 least profitable farms. Since taxes, seed, labor, machinery, and other cost items are about as high per acre for low yielding crops as for crops of higher yield, the more profitable farms had lower costs per bushel of crop produced. This is true because with higher yields there are more bushels over which to spread about the same amount of cost. This conclusion is verified by several years data from cost accounts on Illinois farms. The higher yields of corn, oats, and wheat together with a somewhat larger acreage gave the 20 most profitable farms 2045 bushels more grain per farm than the 20 least profitable farms. This was a factor in enabling them to feed more livestock and still have more crops to sell.

Another of the chief advantages of the 20 most successful farm operators is shown in that they had $3 an acre more livestock investment and $10 an acre more livestock income than the 20 least successful farm operators. This indicates more livestock and a higher efficiency in handling and feeding livestock. Higher efficiency is also shown by the fact that for every $100 worth of feed fed on the 20 most profitable farms there was a livestock income of $147 but a corresponding income of only $118 on the 20 least profitable farms. The income from each $100

worth of feed fed must cover other items of cost such as labor, pasture, shelter, interest, etc. It is evident that the less successful farm operators did not make a profit on their livestock.

The more profitable farms had slightly higher costs per acre for labor, power, equipment, and improvements but they used these cost items in such a way as to bring in much more income per acre. Better crop yields, and more livestock handled more efficiently were the main factors in giving a larger volume of income per acre.

The situation is summed up in the figures showing gross income and expense per acre. The 20 most successful farm operators had average gross incomes of $26.00 and expenses of $11.00 an acre. The corresponding figures for the 20 least successful operators were $11.75 income and $9.77 expense. This gave the two groups net incomes of $15.00 and $1.98 per acre respectively. It is this margin between cost and income which counts.

Some points of strength and some of weakness in your own farm business may be found by comparing the factors from your own record in the following tables with the same factors for the average farm as well as for farms of the high and low profit groups.

Mason, Morgan, Cass, Pike, and Brown Counties - 1928

Item	Your farm	Average of 62 farms	20 most profitable farms	20 least profitable farms
Capital Investments - Total	$	$41 832	$40 627	$32 467
Land		30 626	29 009	23 731
Farm improvements		4 298	4 517	3 655
Machinery and equipment		1 529	1 559	1 164
Feed, grain and supplies		2 456	2 551	1 599
Livestock - Total		2 923	2 991	2 318
Horses		581	519	562
Cattle		1 214	1 189	871
Hogs		963	1 115	705
Sheep		36	54	43
Poultry		124	108	130
Bees		5	6	7
Receipts - Net Increases-Total	$	$ 4 923	$ 6 157	$ 2 766
Feed, grain and supplies		1 184	1 717	776
Labor off the farm		50	65	60
Miscellaneous		24	16	9
Livestock - Total		3 665	4 359	1 921
Horses		---	3	--
Cattle		1 038	766	427
Hogs		2 117	2 982	1 035
Sheep		48	100	36
Poultry		113	60	164
Egg sales		126	118	112
Dairy sales		222	330	145
Bees		1	---	2
Expenses-Net Decreases-Total	$	$ 1 872	$ 1 756	$ 1 436
Farm improvements		265	253	213
Machinery and equipment		388	346	305
Feed, grain and supplies		---	---	---
Misc. livestock expense		62	70	41
Miscellaneous crop expense		219	210	160
Hired labor		505	455	359
Taxes, insurance, etc.		400	397	309
Miscellaneous expenses		26	25	21
Horses - decreases		7	---	23
Miscellaneous livestock decreases		---	---	---
Receipts less expenses	$	$ 3 051	$ 4 401	$ 1 330
Total unpaid labor		848	850	865
Operator's labor		681	610	714
Family labor		167	240	151
Net income from investment and management		2 203	3 551	465
Rate earned on investment	%	5.27%	8.74%	1.43%
Income left before paying for operator's labor		2 884	4 161	1 179
5 percent of Capital Invested		2 092	2 031	1 623
Labor and management wage	$	$ 792	$2 130	$ -444

Mason, Morgan, Cass, Pike and Brown Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 62 farms	20 most profitable farms	20 least profitable farms
Size of farm - acres		240.2	236.8	235.5
Percent of land area tillable		80.6%	83.9%	69.7%
Acres in Corn		76.9	75.3	62.4
Oats		27.7	28.1	23.8
Wheat		34.4	33.4	25.9
Crop yields - Corn, bu. per acre		47.9	52.7	40.3
Oats, bu. per acre		37.8	39.8	30.6
Wheat, bu. per acre		17.2	19.5	11.1
Return per $100 of feed fed to productive livestock		131	147	118
Returns per $100 invested in all productive livestock		144	171	105
For $100 in Cattle		93	89	57
Hogs		208	263	161
Poultry		193	167	217
Investment in productive livestock per acre		10.59	10.74	7.76
Receipts from productive livestock per acre		15.26	18.40	8.16
Man labor cost per acre		5.63	5.51	5.20
Crop acres per man		90.3	94.2	79.8
Crop acres per horse (with tractor)		27.9	28.6	25.9
Crop acres per horse (without tractor)		22.2	20.3	21.5
Expenses per $100 gross income		55	42	83
Machinery cost per acre		1.62	1.46	1.30
Farm improvements cost per acre		1.10	1.07	.93
Gross receipts per acre		20.49	26.00	11.75
Total expenses per acre		11.32	11.00	9.77
Net receipts per acre		9.17	15.00	1.98
Farms with tractor		64.5%	75.0%	30.0%
Value of land per acre		128	122	101
Total investment per acre		174	172	138

Find your Farm Leaks

Mason, Morgan, Cass, Pike and Brown Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
										Man	Horse				
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
12.3	69	59	31	163	348	333	24.60	29.25	2.15	125	42	36	20	41	380
11.3	66	56	29	153	328	313	22.60	27.25	2.65	120	40	34	25	38	360
10.3	63	53	27	143	308	293	20.60	25.25	3.15	115	38	32	30	35	340
9.3	60	50	25	133	288	273	18.60	23.25	3.65	110	36	30	35	32	320
8.3	57	47	23	123	268	253	16.60	21.25	4.15	105	34	28	40	29	300
7.3	54	44	21	113	248	233	14.60	19.25	4.65	100	32	26	45	26	280
6.3	51	41	19	103	228	213	12.60	17.25	5.15	95	30	24	50	23	260
5.3	48	38	17	93	208	193	10.60	15.25	5.65	90	28	22	55	20	240
4.3	45	35	15	83	188	173	8.60	13.25	6.15	85	26	20	60	17	220
3.3	42	32	13	73	168	153	6.60	11.25	6.65	80	24	18	65	14	200
2.3	39	29	11	63	148	133	4.60	9.25	7.15	75	22	16	70	11	180
1.3	36	26	9	53	128	113	2.60	7.25	7.65	70	20	14	75	8	160
0.3	33	23	7	43	108	93	----	5.25	8.15	65	18	12	80	5	140
-0.7	30	20	5	33	88	73	----	3.25	8.65	60	16	10	85	---	120
-1.7	27	17	3	23	68	53	----	1.25	9.15	55	14	8	90	---	100

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

SCOTT COUNTY FARM BUREAU

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

April 1929

M-107

ANNUAL FARM BUSINESS REPORT

Scott County, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 30 farmers in Scott County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6.3 percent on their investments. A wage of $60 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $328, there remains a rate of 5.3 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $1,137. If it is assumed that the labor performed by the operator is worth $60 a month or $720 a year, there is $417 left as pay for the risk and management in operating the business.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by the representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rate earned on farms included in this farm accounting project average about 2 percent higher than on the average of all farms in the same locality. We, therefore, would estimate that the average Scott County farmer earned about 4.3 percent on his total farm investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Scott County since the accounting project was begun in 1926, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent. These industries pay for management in the form of salaries to managers and officers.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $110 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $148 an acre.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

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*Alfred Tate, farm adviser in Scott County, cooperated in supervising and collecting the records used in this report.

Every farm manager can gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $3,185 larger net incomes than the third which were least successful.

The 10 most profitable farms had some advantage in size. They averaged 235 acres while the 10 least profitable farms averaged 180 acres. This difference of 55 acres a farm gave the first group a chance to use labor, power and equipment to a better advantage. Difference in acreage is usually not a very important factor in determining the rate earned on the investment. The more successful farm operators, altho they had larger farms, did not have any more acres in oats. They did have 25 acres more corn and 31 acres more wheat. The extra acreage, therefore, was all in corn and wheat.

It is commonly believed that smaller farms have better crop yields but in this case the 10 most profitable farms were larger and still had larger average yields of corn and oats than the 10 least profitable farms. There was little difference in wheat yields. Many wheat fields were badly damaged by winterkilling during the winter of 1927-1928 and the winterkilling was about equally bad regardless of soil and cultural conditions. With more acres and better yields the 10 most profitable farms had 2,185 bushels more grain per farm than the 10 least profitable farms.

Greater efficiency in handling and feeding livestock was one of the biggest advantages on the more successful farms. They had almost exactly the same investment per acre in livestock but they produced about two dollars an acre more income from livestock than the less successful farms. For every $100 worth of feed fed they produced a livestock income of $163 while the less successful farms produced only $111 from each $100 worth of feed. Scott County is not in a heavy livestock producing section but over half the income on these farms was from livestock, which makes livestock efficiency a very important factor affecting net incomes.

The 10 most profitable farms had about $1.40 an acre less labor cost, altho they had just as much livestock per acre. Part of this advantage was due to the larger size of farm. With less labor per acre they did a better job of farming since they had better crop yields and better results with livestock. They farmed 81 crop acres per man while the 10 least profitable farms had only 54 crop acres per man. There also were more crop acres per horse on the more profitable farms and they had lower costs per acre for equipment and improvements.

The situation is summed up in the figures showing income and expense per acre. The 10 most profitable farms had $10 an acre more gross income and nearly $3 an acre less expense. To be exact, they had average net incomes of $15.06 an acre compared with $1.97 an acre on the 10 least profitable farms. The question of gross income per acre is a very important one. While a big volume of business does not guarantee success it does give opportunity for success. The operating costs cannot be reduced below a practical minimum and few farms can be considered successful which do not take in at least $3,000. To have a satisfactory gross income

the smaller farm must have more income per acre. This often means intensive enterprises. Among the intensive enterprises are dairy cows, poultry, fruit, and vegetables. A few small farms have built up a good volume of business also in special seed production. More volume of business was needed on the 10 least profitable farms. Their average gross income was only $2,536.

The following table gives an interesting comparison of incomes on Scott County farms for the last three years. The year 1928 was the best of the three years. Higher yields of better quality corn and better incomes from cattle were the two chief factors in improvement. Cattle feeding operations were generally profitable during the first half of 1928, altho not so satisfactory during the latter half of the year.

Comparative Earnings on Scott County Farms

Item	1926	1927[1]	1928
Number of farms included	27	29	30
Average size of farm in acres	210	225	222
Average rate earned	2.8%	3.6%	6.3%
Average value of land per acre	$118	$145	$110
Average investment per acre	163	187	148
Investment in livestock per farm	2133	2142	2247
Investment in cattle per farm	584	464	735
Investment in hogs per farm	754	955	798
Investment in poultry per farm	146	140	128
Gross income per acre	16.43	18.28	19.91
Operating cost per acre	11.99	11.61	10.52
Grain income less feed purchases per farm	622	1443	1668
Miscellaneous income per farm	41	33	75
Livestock income per farm	2785	2649	2678
Gross income per farm	3448	4125	4421
Cattle income per farm	449	436	535
Dairy sales per farm	109	216	161
Hog income per farm	1901	1735	1646
Poultry income per farm	284	223	275

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on farms of the group making the best profits and the group making the least profits.

[1] A few records from Morgan county were included for 1927.

Scott County - 1928

Item	Your farm	Average of 30 farms	Ten most profitable farms	Ten least profitable farms
Capital Investments - Total	$_____	$32 854	$30 650	$28 873
Land	_____	24 535	23 997	20 636
Farm improvements	_____	3 220	2 100	4 008
Machinery and equipment	_____	1 328	1 340	942
Feed, grain and supplies	_____	1 524	1 188	1 395
Livestock - Total	_____	2 247	2 025	1 892
Horses	_____	530	443	482
Cattle	_____	735	700	452
Hogs	_____	798	732	796
Sheep	_____	56	23	29
Poultry	_____	128	127	133
Bees	_____	---	---	---
Receipts - Net Increases - Total	$_____	$ 4 421	$ 5 730	$ 2 536
Feed, grain and supplies	_____	1 668	2 650	566
Labor off the farm	_____	58	56	32
Miscellaneous	_____	17	47	--
Livestock - Total	_____	2 678	2 977	1 933
Horses	_____	---	---	---
Cattle	_____	535	677	147
Hogs	_____	1 646	1 837	1 236
Sheep	_____	61	26	21
Poultry	_____	120	147	144
Egg sales	_____	155	136	160
Dairy sales	_____	161	154	230
Bees	_____	---	---	---
Expenses - Net Decreases - Total	$_____	$ 1 522	$ 1 313	$ 1 437
Farm improvements	_____	145	90	225
Machinery and equipment	_____	268	261	231
Feed, grain and supplies	_____	---	---	---
Misc. livestock expense	_____	38	26	39
Miscellaneous crop expense	_____	189	159	158
Hired labor	_____	434	322	422
Taxes, insurance, etc.	_____	406	412	311
Miscellaneous expenses	_____	26	23	29
Horses - decreases	_____	16	20	22
Misc. livestock decreases	_____	---	---	---
Receipts less expenses	$_____	$ 2 899	$ 4 417	$ 1 099
Total unpaid labor	_____	815	877	744
Operator's labor	_____	696	720	648
Family labor	_____	119	157	96
Net income from investment and management	_____	2 084	3 540	355
Rate earned on investment	_____%	6.34%	11.55%	1.23%
Income left before paying for operator's labor	_____	2 780	4 260	1 003
5 percent of Capital Invested	_____	1 643	1 532	1 444
Labor and management wage	$_____	$ 1 137	$ 2 728	$- 441

Scott County - 1928

Factors helping to analyze the farm business	Your farm	Average of 30 farms	Ten most profitable farms	Ten least profitable farms
Size of farm - acres	_____	222	235	180
Percent of land area tillable	_____	81 %	80 %	74 %
Acres in Corn	_____	70	78	53
Oats	_____	18	16	16
Wheat	_____	43	55	24
Crop yields - Corn, bu. per acre	_____	49	52	46
Oats, bu. per acre	_____	40	43	39
Wheat, bu. per acre	_____	16	17	13
Return per $100 of feed fed to productive livestock	_____	134	163	111
Returns per $100 invested in all productive livestock	_____	147	172	146
For $100 in Cattle	_____	92	114	88
Hogs	_____	138	219	169
Poultry	_____	208	202	226
Investment in productive livestock per acre	_____	8.19	7.36	7.37
Receipts from productive livestock per acre	_____	12.06	12.67	10.77
Man labor cost per acre	_____	5.63	5.10	6.49
Crop acres per man	_____	76.0	81.5	54.5
Crop acres per horse (with tractor)	_____	29.8	34.2	19.5
(without tractor)	_____	16.5	25.0	15.5
Expenses per $100 gross income	_____	53	38	86
Machinery cost per acre	_____	1.21	1.11	1.28
Farm improvements cost per acre	_____	.65	.38	1.25
Gross receipts per acre	_____	19.91	24.38	14.09
Total expenses per acre	_____	10.52	9.32	12.12
Net receipts per acre	_____	9.39	15.06	1.97
Percent of farms with tractor	_____	67 %	80 %	60 %
Value of land per acre	_____	110	102	115
Total investment per acre	_____	148	130	160

Find Your Farm Leaks

Scott County - 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man labor cost per acre	Crop acres per Man	Crop acres per Horse		Expense per $100 income	Gross receipts per acre	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
13.3	70	61	30	162	328	348	22.20	26.00	2.15	110	44	30	18	41	360
12.3	67	58	28	152	308	328	20.20	24.00	2.65	105	42	28	23	38	340
11.3	64	55	26	142	288	308	18.20	22.00	3.15	100	40	26	28	35	320
10.3	61	52	24	132	268	288	16.20	20.00	3.65	95	38	24	33	32	300
9.3	58	49	22	122	248	268	14.20	18.00	4.15	90	36	22	38	29	280
8.3	55	46	20	112	228	248	12.20	16.00	4.65	85	34	20	43	26	260
7.3	52	43	18	102	208	228	10.20	14.00	5.15	80	32	18	48	23	240
6.3	49	40	16	92	188	208	8.20	12.00	5.65	75	30	16	53	20	220
5.3	46	37	14	82	168	188	6.20	10.00	6.15	70	28	14	58	17	200
4.3	43	34	12	72	148	168	4.20	8.00	6.65	65	26	12	63	14	180
3.3	40	31	10	62	128	148	2.20	6.00	7.15	60	24	10	68	11	160
2.3	37	28	8	52	108	128	----	4.00	7.65	55	22	8	73	8	140
1.3	34	25	6	42	88	108	----	2.00	8.15	50	20	6	78	5	120
0.3	31	22	4	32	68	88	----	----	8.65	45	18	4	83	-	100
-0.7	28	19	-	22	48	68	----	----	9.15	40	16	-	88	-	80

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

JERSEY, GREENE AND MACOUPIN COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-eight Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

May, 1929

M-113

ANNUAL FARM BUSINESS REPORT

Jersey, Greene, and Macoupin Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 38 farmers in Jersey, Greene and Macoupin Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6 percent on their investments. A wage of $50 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $333, there remains a rate of 5 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $877. If it is assumed that the labor performed by the operator is worth $50 a month or $600 a year, there is $277 left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $113 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $164 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these counties, earned about 4 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was more favorable than 1927 for these counties, but earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number

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* F. H. Shuman, R. H. Clanahan, and W. F. Coolidge, farm advisers in Jersey, Greene and Macoupin Counties respectively, cooperated in supervising and collecting the records used in this report.

of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than most other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $2119 larger net incomes than the third which were least successful.

There was only 10 acres difference in average size between the 13 most profitable and the 13 least profitable farms. The more profitable farms had a higher percentage of tillable land however which gave them 26 acres per farm more land that might be cropped. Difference in size of farm is usually not an important factor in determining the rate earned on the investment. In this case, however, the more successful farms probably had some advantage in their larger acreage of tillable land since this made it possible for them to secure lower costs per acre for labor, power, equipment and improvements.

One of the chief advantages of the 13 most profitable farms was in higher crop yields. They produced 4 bushels more corn, 8 bushels more oats, 2 bushels more wheat, and 9 bushels more soybeans per acre than the 13 least profitable farms. Figured on their acreage this gave the more successful farm operators 1454 bushels more grain per farm.

The greatest apparent advantage of the 13 most successful farm operators was in a higher efficiency with livestock. They secured $175 of livestock income for each $100 worth of feed fed while the 13 least successful operators had a corresponding income of only $130. The livestock income must cover other items of cost besides feed, such as labor, pasture, equipment, shelter, etc. It is the margin between costs and income that counts and this margin was considerably wider for the more successful operators. The 13 most profitable farms show a greater efficiency in each of the different livestock enterprises. They had less livestock per acre as well as per farm, however, as shown by the livestock investment. This is unusual since most investigations of this type have shown more livestock on the more profitable farms. In this case it is evident that the more successful farmers more than made up in efficiency for any lack in amounts of livestock. It is significant that the 13 most successful farm operators had average sales or increases from crops amounting to $2189 after feed purchases have been deducted while the 13 least successful operators purchased feed to the value of $393 above their crop sales or increases. It is possible that some farms in the low income group have too much livestock for a well balanced farm organization. In some cases it might be advisable to adjust the numbers of livestock so as to reduce the bill for purchased feed.

As would be expected with less livestock per acre the more successful farmers had lower costs per acre for labor, equipment, and improvements. This is in spite of the fact, however, that they had fewer acres of nontillable land which ordinarily requires less labor and equipment to operate.

The situation on the two groups of farms is fairly well summed up in the figures showing gross income and expense per acre with the resulting net income per acre. The 13 most successful farmers secured $6.58 more income with $4.37 less expense per acre. These are not large amounts but they make a difference of nearly $11 an acre in net income which means the difference between paying interest and indebtedness or running deeper into debt.

The following table presents an interesting comparison of farm earnings and investments in the Jersey and Greene County district during the last five years. The rate earned on the investment as shown on the accounts for this area has averaged better than for most sections of the state. Hog production is the largest single source of income on farms of this district and earnings have tended to move up and down with the variations in prices paid for hogs.

Comparative Earnings on Farms in Jersey
Greene and Adjoining Counties

Item	1924[1]	1925[2]	1926[3]	1927[3]	1928
Number of farms included	41	40	31	28	38
Average size of farms in acres . .	174	185	207	215	204
Average rate earned on investment.	4.6%	7.1%	6.0%	3.9%	6.0%
Average value of land per acre . .	$ 104	$ 115	$ 111	$ 106	$ 113
Average investment per acre. . . .	146	159	161	153	164
Investment in livestock per farm .	2,037	2,142	3,281	2,819	2,778
Investment in cattle per farm. . .	993	819	1,478	1,292	1,465
Investment in hogs per farm. . . .	410	618	981	756	648
Investment in poultry per farm . .	130	114	130	166	144
Gross income per acre.	18.61	23.35	22.38	18.95	23.26
Operating cost per acre.	11.87	12.08	12.63	13.00	13.48
Crop increases less feed purchases per farm.	783	1,087	351	554	1,014
Miscellaneous income per farm. . .	151	117	63	92	99
Livestock income per farm.	2,311	3,128	4,218	3,428	3,633
Gross income per farm.	3,245	4,332	4,632	4,074	4,746
Cattle income per farm	232	415	987	951	772
Dairy products income per farm . .	802	559	600	629	906
Hog income per farm.	913	1,845	2,271	1,456	1,549
Poultry income per farm.	274	234	306	326	320

[1]Records from Macoupin, Jersey and Greene counties included for 1924.

[2]Records from Jersey, Greene and Morgan counties included for 1925.

[3]Records from Jersey, Greene counties included for 1926 and 1927.

Some points of strength and some of weakness in your own farm business may be found by comparing the factors from your own record in the following tables with the same factors for the average farm as well as for farms of the high and low profit groups.

Jersey, Greene, Macoupin Counties - 1928

Item	Your farm	Average of 38 farms	13 most profitable farms	13 least profitable farms
Capital Investments - Total --	$_____	$33 355	$28 491	$30 370
Land----------		23 045	19 661	20 361
Farm improvements----------		3 735	3 161	3 336
Machinery and equipment-----		1 617	1 473	1 753
Feed, grain and supplies----		2 180	2 024	1 922
Livestock - total----------	_____	2 778	2 172	2 998
Horses----------		453	416	452
Cattle----------		1 465	1 043	1 598
Hogs----------		648	535	690
Sheep----------		68	15	125
Poultry----------		144	162	133
Bees----------		---	1	---
Receipts - Net Increases - Total	$_____	$ 4 746	$ 5 267	$ 3 806
Farm improvements----------		---	---	---
Feed, grain and supplies----		1 014	2 189	---
Labor off the farm----------		89	28	174
Miscellaneous----------		10	9	13
Livestock - Total----------	_____	3 633	3 041	3 619
Horses----------		---	---	---
Cattle----------		772	500	967
Hogs----------		1 549	1 472	1 461
Sheep----------		86	20	177
Poultry----------		133	117	114
Egg sales----------		187	241	155
Dairy sales----------		906	690	745
Bees----------		---	1	---
Expenses-Net Decreases-Total--	$_____	$ 1 898	$ 1 628	$ 2 338
Farm improvements----------		214	157	247
Machinery and equipment-----		413	330	379
Feed, grain and supplies----		---	---	393
Misc. livestock expense-----		56	25	88
Miscellaneous crop expense--		199	190	170
Hired labor----------		646	578	671
Taxes, insurance, etc.------		317	296	345
Miscellaneous expenses------		26	25	27
Horses - decreases----------		27	27	18
Miscellaneous livestock decreases _____		---	---	---
Receipts less expenses--------	$_____	$ 2 848	$ 3 639	$ 1 468
Total unpaid labor----------		853	805	753
Operator's labor----------		550	540	531
Family labor----------		303	265	222
Net income from investment and management--		1 995	2 834	715
Rate earned on investment-----	_____%	5.98%	9.95%	2.35%
Income left before paying for operator's labor--		2 545	3 374	1 246
5 percent of Capital Invested		1 668	1 425	1 519
Labor and management wage-----	$_____	$ 877	$ 1 949	$ - 273

Jersey, Greene, Macoupin Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 38 farms	13 most profitable farms	13 least profitable farms
Size of farm - acres		204	190	180
Percent of land area tillable		85.9%	90.4%	80.9%
Acres in Corn		71	72	62
Oats		21	23	17
Wheat		18	21	10
Soybeans		14	15	11
Crop yields - Corn, bu. per acre		46.4	48.3	43.9
Oats, bu. per acre		36.2	35.2	26.7
Wheat, bu. per acre		15.5	17.1	15.9
Soybeans, bu. per acre		19.2	21.0	12.3
Return per $100 of feed fed to productive livestock		147	175	130
Returns per $100 invested in all productive livestock		148	180	124
For $100 in Cattle		107	116	93
Hogs		244	296	207
Poultry		225	238	198
Investment in productive livestock per acre		12.06	8.91	16.17
Receipts from productive livestock per acre		17.80	16.01	20.05
Man labor cost per acre		7.35	7.28	7.91
Crop acres per man		62.2	70.0	53.1
Crop acres per horse (with tractor)		29.5	33.5	25.0
(without tractor)		16.7	17.8	17.0
Expenses per $100 gross income		58.00	46.00	81.00
Machinery cost per acre		2.02	1.74	2.11
Farm improvements cost per acre		1.05	.83	1.37
Gross receipts per acre		23.26	27.72	21.14
Total expenses per acre		13.48	12.80	17.17
Net receipts per acre		9.78	14.92	3.97
Farms with tractor		45%	38%	46%
Value of land per acre		113	103	113
Total investment per acre		164	150	169

Find Your Farm Leaks

Jersey, Greene and Macoupin Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per A.	Receipts per A.	Man lab. cost per A.	Crop acres per			Expense per $100	Gross receipts	Size of
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry	in L.S.	from L.S.	A.		Tractor	No tractor	income	per A.	farm
13.0	67	57	36	177	386	365	26	32	3.85	97	43	31	25	44	340
12.0	64	54	33	167	366	345	24	30	4.35	92	41	29	30	41	320
11.0	61	51	30	157	346	325	22	28	4.85	87	39	27	35	38	300
10.0	58	48	27	147	326	305	20	26	5.35	82	37	25	40	35	280
9.0	55	45	24	137	306	285	18	24	5.85	77	35	23	45	32	260
8.0	52	42	21	127	286	265	16	22	6.35	72	33	21	50	29	240
7.0	49	39	18	117	264	245	14	20	6.85	67	31	19	55	26	220
6.0	46	36	15	107	244	225	12	18	7.35	62	29	17	60	23	200
5.0	43	33	12	97	224	205	10	16	7.85	57	27	15	65	20	180
4.0	40	30	9	87	204	185	8	14	8.35	52	25	13	70	17	160
3.0	37	27	6	77	184	165	6	12	8.85	47	23	11	75	14	140
2.0	34	24	3	67	164	145	4	10	9.35	42	21	9	80	11	120
1.0	31	21	-	57	144	125	2	8	9.85	37	19	7	85	8	100
0.0	28	18	-	47	124	105	-	6	10.35	32	17	5	90	5	80
-1.0	25	15	-	37	104	85	-	4	10.85	27	15	3	95	2	60

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

MADISON, BOND AND MONTGOMERY COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-three Farms

for

1928

The farm account is a guide to more profitable farm management if its facts are studied and used.

Urbana, Illinois

May, 1929

M-117

ANNUAL FARM BUSINESS REPORT

Madison, Bond and Montgomery Counties, Illinois, 1928

Prepared by H. R. Hudelson, F. L. Underwood, and H. C. M. Case*

The 33 farmers in Madison, Bond, Montgomery Counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 4.6 percent on their investments. A wage of $50 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $215, there remains a rate of 3.6 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $508. If it is assumed that the labor performed by the operator is worth $50 a month or $600 a year, there is nothing left as pay for management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $76 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $117 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in Madison, Bond and Montgomery Counties earned about 2.6 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for this section since 1925, but these earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent as reported by a nationally known

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* Alfred Raut, W. E. Foard, and A. E. Snyder, farm advisers in Madison, Bond, and Montgomery Counties respectively cooperated in supervising and collecting the records used in this report.

bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than other farmers in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1325 larger net incomes than the third which were least successful.

The 11 most profitable farms had 68 less acres per farm than the 11 least profitable farms. It is doubtful however whether this smaller size had much if any influence in favor of larger earnings. Reports for this area in the past have agreed in showing a smaller average size for the more profitable farms, but similar studies in other areas have usually shown little if any difference in size between the more profitable and the less profitable farms. In this area there is relatively more dairying and other livestock production on the farms of medium to small size. This seems to have been a factor in the greater success of the farms falling into the more profitable group. The more successful farms altho smaller in size had 8 acres more land in corn than the less successful farms, the more successful farms tending to produce relatively more corn and less wheat. This might be expected since these farms have more livestock and therefore need more feed grain. The greater acreage of corn was especially advantageous for 1928 since corn yields were much better than wheat yields in this area. This was due in part at least to severe winter killing of wheat during the winter of 1927-1928.

The 11 most profitable farms produced 6 bushels more corn and 13 bushels more oats per acre than the 11 least profitable farms. This advantage in yield was one of the important factors favoring the more successful farms.

The greatest advantages of the 11 most profitable farms were in handling and feeding livestock more efficiently and in having more livestock per acre. For every $100 worth of feed fed on these farms there was a livestock income of $163 whereas the corresponding income for each $100 worth of feed fed on the 11 least profitable farms was $140. The income from feed fed to livestock must cover other items of cost such as labor, pasture, shelter, interest, etc. It is the margin above these costs which goes to increase the net income. The more successful farmers show a higher efficiency in dairy and hog production.

The more successful farm operators not only handled and fed their dairy cattle and hogs more efficiently but they had larger cattle and hog enterprises. Their investment per acre in livestock was $12.36, as compared with $6.58 for the less successful operators. With about twice as much livestock investment per acre the more successful operators secured three times as much livestock income per acre as their less successful neighbors.

The 11 most profitable farms had slightly larger costs per acre for labor and equipment. This was due chiefly to smaller size of farm and to having

more livestock per acre. They produced so much more income per acre, however, from these slightly higher costs that the extra expenditure for labor and equipment was well justified as compared with the 11 least profitable farms. The situation is summed up in the figures for gross income and expense per acre. The 11 most profitable farms had average gross incomes of $23.10 and expenses of $11.93 an acre compared with $11.74 income and $10.35 expense on the 11 least profitable farms. This left net incomes of $11.17 and $1.39 per acre respectively.

This study of the accounts from farms in Madison, Bond and Montgomery Counties furnishes a good illustration of the fact that size of business is more important than size of farm in determining net income. Size of business is best measured by the amount of gross income. In this case the 11 most profitable farms, altho 68 acres smaller in size of farm, did $850 more business than the 11 least profitable farms. A fair volume of gross income is necessary to financial success of the farm business and can be built up on a relatively small acreage by proper selection and combination of enterprises. Any farm business which takes in less than $3,000 gross income should consider the problem of doing a larger business.

The following tables give an interesting comparison of earnings and investments on farms in the Madison and Bond County district for the last four years. Some allowance must be made for the shift in territory included for different years. These figures agree with those from most other sections of the state in showing that farm earnings were somewhat better for 1928 than for 1926 or 1927.

Comparative Earnings on Farms in the Madison and Bond County District for the Years 1925 to 1928

Item	1925[1]	1926[1]	1927[2]	1928
Number of farms	30	30	27	33
Average size of farms, acres	190	224	161	184
Average rate earned, percent	6.5	1.6	4.4	4.6
Average value of land per acre	$ 82	$ 68	$ 66	$ 76
Average investment per acre	124	109	107	117
Investment in livestock per farm	2148	2543	1627	1811
Investment in cattle per farm	1031	1203	683	844
Investment in hogs per farm	402	519	394	323
Investment in poultry per farm	171	199	188	176
Gross income per acre	20.48	12.81	16.24	16.74
Operating cost per acre	8.69	11.10	11.53	11.30
Net increase from crops per farm	255	-	338	540
Miscellaneous income per farm	122	90	135	101
Livestock income per farm	3060	2781	2135	2439
Gross income per farm	3437	2871	2608	3080
Cattle income per farm	493	539	292	452
Dairy sales per farm	740	661	765	906
Hog income per farm	1387	1174	734	772
Poultry income per farm	376	340	296	328

[1] Records from Madison, Bond, Macoupin and Montgomery Counties for 1925 and 1926.

[2] Records from Madison and Bond Counties only for 1927.

Item	Your farm	Average of 33 farms	11 most profitable farms	11 least profitable farms
Capital Investments - Total	$	$21 566	$17 296	$24 619
Land		14 003	10 926	16 645
Farm improvements		3 105	2 278	3 650
Machinery and equipment		1 256	973	1 406
Feed, grain and supplies		1 391	1 261	1 253
Livestock - Total		1 811	1 858	1 665
Horses		339	286	396
Cattle		844	775	692
Hogs		328	504	223
Sheep		120	96	183
Poultry		176	197	165
Bees		2	-	6
Rabbits		2	-	
Receipts - Net Increases - Total	$	$ 3 080	$ 3 350	$ 2 500
Feed, grain and supplies		540	---	735
Labor off the farm		81	76	105
Miscellaneous		20	43	2
Livestock - Total		2 439	3 231	1 658
Horses		---	---	3
Cattle		452	363	386
Hogs		772	1 552	343
Sheep		77	57	71
Poultry		120	120	155
Egg sales		208	212	195
Dairy sales		806	927	499
Bees		2	---	6
Rabbits		2	---	
Expenses - Net Decreases - Total	$	$ 1 232	$ 1 015	$ 1 276
Farm improvements		189	118	254
Machinery and equipment		333	249	341
Feed, grain and supplies		---	81	---
Misc. livestock expense		25	32	18
Miscellaneous crop expense		200	151	223
Hired labor		252	203	195
Taxes, insurance, etc.		197	146	220
Miscellaneous expenses		29	29	25
Horses - decreases		7	6	-
Miscellaneous livestock decreases				
Receipts less expenses	$	$ 1 848	$ 2 335	$ 1 224
Total unpaid labor		848	715	929
Operator's labor		586	582	600
Family labor		262	133	329
Net income from investment and management		1 000	1 620	295
Rate earned on investment	%	4.63%	9.36%	1.20%
Income left before paying for operator's labor		1 586	2 202	895
5 percent of Capital Invested		1 078	865	1 231
Labor and management wage	$	$ 508	$ 1 337	$ - 336

Madison, Bond and Montgomery Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 33 farms	11 most profitable farms	11 least profitable farms
Size of farm - acres		184.0	145.0	213.0
Percent of land area tillable	%	83.4 %	85.5 %	80.1 %
Acres in Corn		45.0	46.0	38.0
Oats		27.0	19.0	35.0
Wheat		15.0	10.0	24.0
Soybeans		9.0	2.0	13.0
Crop yields - Corn, bu. per acre		40.2	40.6	34.8
Oats, bu. per acre		33.8	41.0	27.5
Wheat, bu. per acre		6.8	7.1	6.8
Soybeans, bu. per acre		11.2	---	12.5
Returns per $100 of feed fed to productive livestock		156	163	140
Returns per $100 invested in all productive livestock		150	181	118
For $100 in Cattle		130	145	103
Hogs		213	262	157
Poultry		181	181	193
Investment in productive livestock per acre		8.82	12.36	6.58
Receipts from productive livestock per acre		13.20	22.34	7.76
Man labor cost per acre		5.98	6.33	5.28
Crop acres per man		70.0	66.3	80.9
Crop acres per horse (with tractor)		26.3	27.5	26.3
(without tractor)		21.4	18.9	23.6
Expenses per $100 gross income		68.00	52.00	88.00
Machinery cost per acre		1.81	1.72	1.60
Farm improvements cost per acre		1.03	.81	1.19
Gross receipts per acre		16.74	23.10	11.74
Total expenses per acre		11.30	11.93	10.35
Net receipts per acre		5.44	11.17	1.39
Farms with tractor		52.0 %	33.3 %	45.4 %
Value of land per acre		76	75	78
Total investment per acre		117	119	116

Find Your Farm Leaks

Madison, Bond and Montgomery Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse				
											Tractor	No tractor			
11.6	61	55	21	200	353	321	15.82	27.20	2.50	105	40	35	30	38	320
10.6	58	52	19	190	333	301	14.82	25.20	3.00	100	38	33	35	35	300
9.6	55	49	17	180	313	281	13.82	23.20	3.50	95	36	31	40	32	280
8.6	52	46	15	170	293	261	12.82	21.20	4.00	90	34	29	45	29	260
7.6	49	43	13	160	273	241	11.82	19.20	4.50	85	32	27	50	26	240
6.6	46	40	11	150	253	221	10.82	17.20	5.00	80	30	25	55	23	220
5.6	43	37	9	140	233	201	9.82	15.20	5.50	75	28	23	60	20	200
4.6	40	34	7	130	213	181	8.82	13.20	6.00	70	26	21	65	17	180
3.6	37	31	5	120	193	161	7.82	11.20	6.50	65	24	19	70	14	160
2.6	34	28	3	110	173	141	6.82	9.20	7.00	60	22	17	75	11	140
1.6	31	25	-	100	153	121	5.82	7.20	7.50	55	20	15	80	8	120
0.6	28	22	-	90	133	101	4.82	5.20	8.00	50	18	13	85	5	100
-0.4	25	19	-	80	113	81	3.82	3.20	8.50	45	16	11	90	2	80
-1.4	22	16	-	70	93	61	2.82	1.20	9.00	40	14	9	95	-	60
-2.4	19	13	-	60	73	41	1.82	----	9.50	35	12	7	100	-	40

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

CLINTON COUNTY FARM BUREAU

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Thirty-three Farms

for

1928

The farm account is a guide to
more profitable farm management
if its facts are studied and
used.

Urbana, Illinois

April 1929

M-105

ANNUAL FARM BUSINESS REPORT

Clinton County, Illinois, 1928

Prepared by R. R. Hudelson, F. L. Underwood and H. C. M. Case*

The 33 farmers in Clinton County who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 6.1 percent on their investments. A wage of $50 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $182, there remains a rate of 5.1 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $786. If it is assumed that the labor performed by the operator is worth $50 a month or $600 a year, there is $186 left as pay for the risk and management in operating the business.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average Clinton County farmer earned about 5.1 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and 1928 was the best year for Clinton County since 1925, but these earnings are low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent. These industries pay for management in the form of salaries to managers and officers.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $68 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $113 an acre.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

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*W. A. Cope, farm adviser in Clinton County, cooperated in supervising and collecting the records used in this project.

Every farm manager can gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1,611 larger net incomes than the third which were least successful.

The 11 most profitable farms had about 20 acres less land but they had about the same acreage of corn, oats and wheat, and they had only slightly larger yields than the 11 least profitable farms. There also was little difference in the valuation placed on the land.

The better management and feeding of livestock accounted for nearly all of the difference in incomes between the two groups of farms. The more successful farms had about 50 percent more investment per acre in livestock and they secured about 100 percent more income per acre from livestock. They secured $201 of income from each $100 worth of feed fed to livestock as compared with $121 income per $100 worth of feed fed on the less successful farms. This income from feed must, of course, cover such other items of cost as labor, pasture, shelter, livestock equipment, etc. As an average of the last two years feed has constituted 60 percent of the cost of producing milk on the Clinton County farms keeping cost accounts. If all the feed were fed for milk production on this basis it would require a return of $167 for each $100 worth of feed fed in order to meet expenses. Of course some of the feed on these farms was fed to other classes of livestock such as hogs and poultry, but the larger portion was fed to cows. The 11 most profitable farms averaged 11.6 cows per farm and dairy sales of $160 per cow as compared with 8.4 cows per farm and dairy sales of $121 per cow on the 11 least profitable farms. The most important single factor which favored the more successful farms was this larger size and greater efficiency of the dairy enterprise. They also secured better results from hogs and poultry as shown in the comparative income for each $100 invested in these classes of livestock. They had a hog income of $238 and a poultry income of $215 for each $100 of investment as compared with a similar income of $72 from hogs and $169 from poultry on the less successful farms.

The 11 most profitable farms had somewhat larger costs per acre for labor, equipment and improvements, but because of their larger gross incomes their expense per $100 of gross income was smaller. It is important to note that the 11 most successful farm operators had average gross incomes of $3,864 a farm as compared with $2,158 a farm for the 11 least successful operators. Very few farms are successful if their gross incomes fall below $3,000 per year. A smaller gross income will seldom cover the minimum amount of operating expense and leave a satisfactory margin to cover interest or leave a reasonable income for the farm family.

The situation is summed up in the figures showing the income and expense per acre. The 11 most profitable farms had a gross income of $25.45 an acre compared with $12.69 an acre for the 11 least profitable farms. Their operating expenses amounted to $13.22 and $11.24 an acre respectively. It is interesting to note that the more successful operators with only a little more expense per acre secured more than twice as much income per acre.

The following table shows an interesting comparison for the last five years of the variation in earnings and investments on the average account keeping farm in Clinton County. The average rate earned for 1928 was slightly higher than for any year of the last five altho it is practically the same as in 1925. The higher rate was due to larger gross incomes and not to less expense. The chief factor was an increase in dairy sales but small increases came from crops, poultry, hogs, and cattle.

COMPARATIVE EARNINGS ON CLINTON COUNTY FARMS

Item	1924	1925	1926	1927	1928
Number of farm records.	58	60	56	35	33
Average size of farm, acres . . .	164	165	172	153	161
Average rate earned	4.7%	5.9%	3.5%	4.4%	6.1%
Average value of land per acre. .	$ 64	$ 64	$ 66	$ 69	$ 68
Average investment per acre . . .	105	105	108	112	113
Investment in livestock per farm.	1655	1703	1884	1755	1995
Investment in cattle per farm . .	816	865	941	826	1014
Investment in hogs per farm . . .	120	134	188	190	191
Investment in poultry per farm. .	260	264	279	281	304
Gross income per acre	15.87	18.19	15.28	16.80	19.03
Operating cost per acre	10.91	11.94	11.51	11.90	12.19
Net increase from feed and grain per farm.	589	657	---	97	204
Miscellaneous income per farm . .	114	126	139	107	113
Livestock income per farm	1901	2222	2494	2370	2750
Gross income per farm	2604	3005	2633	2574	3067
Cattle income per farm.	169	224	246	384	406
Dairy sales per farm.	1044	1099	1245	1172	1408
Hog income per farm	159	255	358	286	314
Poultry income per farm	520	630	629	514	608

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm as well as on the farms of the group making the best profits and the group making the least profits.

Clinton County - 1928

Item	Your farm	Average of 33 farms	Eleven most profitable farms	Eleven least profitable farms
Capital Investments - Total	$_____	$18 193	$18 128	$18 011
Land	_____	11 007	10 792	11 108
Farm improvements	_____	2 484	2 713	2 155
Machinery and equipment	_____	1 296	1 257	1 208
Feed, grain and supplies	_____	1 411	1 171	1 639
Livestock - Total	_____	1 995	2 195	1 901
Horses	_____	457	475	418
Cattle	_____	1 014	1 187	913
Hogs	_____	191	225	189
Sheep	_____	28	16	55
Poultry	_____	304	288	326
Bees	_____	1	4	-
Receipts - Net Increases - Total	$_____	$ 3 067	$ 3 864	$ 2 158
Feed, grain and supplies	_____	204	193	138
Miscellaneous	_____	113	107	78
Livestock - Total	_____	2 750	3 564	1 942
Horses	_____	---	---	---
Cattle	_____	406	469	264
Hogs	_____	314	556	126
Sheep	_____	13	14	12
Poultry	_____	159	180	114
Egg sales	_____	449	485	407
Dairy sales	_____	1 408	1 858	1 019
Bees	_____	1	2	12
Expenses - Net Decreases - Total	$_____	$ 951	$ 1 002	$ 841
Farm improvements	_____	181	177	165
Machinery and equipment	_____	239	241	206
Feed, grain and supplies	_____	---	---	---
Misc. livestock expense	_____	24	28	21
Miscellaneous crop expense	_____	208	222	189
Hired labor	_____	125	156	76
Taxes, insurance, etc.	_____	141	130	155
Miscellaneous expenses	_____	21	23	19
Horses - decreases	_____	12	25	10
Miscellaneous livestock decreases _____	_____	---	---	---
Receipts less expenses	$_____	$ 2 116	$ 2 862	$ 1 317
Total unpaid labor	_____	1 014	1 005	1 071
Operator's labor	_____	594	582	600
Family labor	_____	420	423	471
Net income from investment and management	_____	1 102	1 857	246
Rate earned on investment	_____%	6.1%	10.2%	1.4%
Income left before paying for operator's labor	_____	1 696	2 439	846
5 percent of Capital Invested	_____	910	906	900
Labor and management wage	$_____	$ 786	$ 1 533	$ - 54

Clinton County - 1928

Factors helping to analyze the farm business	Your farm	Average of 33 farms	Eleven most profitable farms	Eleven least profitable farms
Size of farm - acres	_____	161	152	170
Percent of land area tillable	_____	89 %	91 %	90 %
Acres in Corn	_____	40	39	41
Oats	_____	35	36	40
Wheat	_____	16	14	18
Crop yields - Corn, bu. per acre	_____	35	36	35
Oats, bu. per acre	_____	40	42	37
Wheat, bu. per acre	_____	4	3	4
Return per $100 of feed fed to productive livestock	_____	$ 164	$201	$121
Returns per $100 invested in all productive livestock	_____	171	192	132
For $100 in Cattle	_____	165	180	136
Hogs	_____	169	238	72
Poultry	_____	201	215	169
Investment in productive livestock per acre	_____	10.00	12.25	8.64
Receipts from productive livestock per acre	_____	17.06	23.48	11.42
Man labor cost per acre	_____	7.07	7.65	6.74
Crop acres per man	_____	67	65	72
Crop acres per horse (with tractor)	_____	24	27	25
(without tractor)	_____	21	18	26
Expenses per $100 gross income	_____	$ 64	$ 52	$ 89
Machinery cost per acre	_____	1.48	1.59	1.21
Farm improvements cost per acre	_____	1.12	1.17	.97
Gross receipts per acre	_____	19.03	25.45	12.69
Total expenses per acre	_____	12.19	13.22	11.24
Net receipts per acre	_____	6.84	12.23	1.45
Percent of farms with tractor	_____	30 %	27 %	36 %
Value of land per acre	_____	68	71	65
Total investment per acre	_____	113	119	106

Find Your Farm Leaks

Clinton County, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per acre in L. S.	Receipts per acre from L.S.	Man lab. cost per acre	Crop acres per			Expense per $100 income	Gross receipts per acre	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse				
											Tractor	No tractor			
13	56	61	18	235	309	340	24	31	3.50	102	38	35	29	33	300
12	53	58	16	225	289	320	22	29	4.00	97	36	33	34	31	280
11	50	55	14	215	269	300	20	27	4.50	92	34	31	39	29	260
10	47	52	12	205	249	280	18	25	5.00	87	32	29	44	27	240
9	44	49	10	195	229	260	16	23	5.50	82	30	27	49	25	220
8	41	46	8	185	209	240	14	21	6.00	77	28	25	54	23	200
7	38	43	6	175	189	220	12	19	6.50	72	26	23	59	21	180
6.0	35	40	4	165	169	200	10	17	7.00	67	24	21	64	19	160
5	32	37	2	155	149	180	8	15	7.50	62	22	19	69	17	140
4	29	34	0	145	129	160	6	13	8.00	57	20	17	74	15	120
3	26	31	-	135	109	140	4	11	8.50	52	18	15	79	13	100
2	23	28	-	125	89	120	2	9	9.00	47	16	13	84	11	80
1	20	25	-	115	69	100	-	7	9.50	42	14	11	89	9	60
0	17	22	-	105	49	80	-	5	10.00	37	12	9	94	7	40
-1	14	19	-	95	29	60	-	3	10.50	32	10	7	99	5	20

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

ST. CLAIR COUNTY FARM BUREAU

ANNUAL FARM BUSINESS REPORT

on

Thirty-two Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

April, 1929

M 103

ANNUAL FARM BUSINESS REPORT

St. Clair County, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, H. C. M. Case*

The 32 farmers in St. Clair County who kept financial records in the Illinois Farm Account Project for 1928 earned an average of 6.3 percent on their investments. This rate of 6.3 percent represents their pay for use of the capital invested and for the management and risk in operating the business. No salary was deducted for management. Only a wage of $50 a month for the operator's labor was allowed as pay for his time before computing the rate earned. No satisfactory method of valuing management on farms has been found, but if we allow one percent on the investment as pay for management, in this case amounting to $211, there remains a rate of 5.3 percent as pay for capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $874. If it is assumed that the labor performed by the operator is worth $50 a month or $600 a year, there remains $274 as pay for the risk and management in operating the business.

Some readers may be inclined to think that these figures indicate a prosperous condition on St. Clair County farms for 1928. They are in contrast, however, with a list of earnings in different industries for 1928 reported in an official publication of one of the largest New York banks. This list includes 38 different industries and a miscellaneous group, covering in all 900 companies. These businesses pay for management in salaries and still show an average rate earned on their net worth of 12.1 percent. It should be remembered also that the farm income figures given in this report do not represent the rank and file of farmers. They are taken from the records of farmers who are business-like and progressive enough not only to keep accounts but to submit them to representatives of the University for analysis and recommendation. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rate earned on farms keeping accounts in the University farm accounting project averages about 2 percent higher than the average of all farms in the same locality. We would therefore estimate that the average St. Clair County farmer earned about 4.3 percent on his investment for 1928.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuations on which the investment is computed. The average value of the land included in this report was placed at $93 an acre. Other items including improvement, equipment, livestock, and feed made a total investment of $140 an acre.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in

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* B. W. Tillman, farm adviser in St. Clair County, cooperated in supervising and collecting the records used in this report.

this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. The item of produce may be included as additional labor income.

Every farm manager can gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more successful then the average and those which are less successful. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1,376 larger net incomes than the third which were least successful.

Some of the reasons for this difference are evident from a study of the average figures for each group. The more successful operators had no advantage in size of farm since they had an average of nearly 50 acres less land. There was only $4 an acre difference in the average value placed on the land of the two groups, indicating no great difference in quality of soil and location.

An examination of the data indicates that the greatest differences in net income were due to differences in crop yields and livestock efficiency. There was little difference in wheat yields, probably due to the fact that nearly all winter wheat was badly damaged by winter killing during the winter of 1927-28. The more successful group of farms, however, averaged 8 bushels more corn and 6 bushels more oats than their less successful neighbors. This extra yield adds directly to the net income, since it usually costs about as much to produce a low yield as a higher one without ordinary limits. The more successful farms produced as much oats and almost as much corn as the less successful farms on a smaller acreage in each case. This gives the more successful farms a lower cost of production since they have to charge less labor, taxes, and interest against about the same amount of crop.

The greatest single advantage of the more successful farm operators was in their greater efficiency in producing and marketing livestock products. With a smaller acreage of land they sold more livestock products and still had more crops to sell than the less successful operators. This indicates more efficient feeding and management of livestock. The same conclusion may be drawn from the fact that the more successful farmers realized a return of $1.53 for each $100 worth of feed fed to livestock, while the less successful ones realized $156, or $27 less for each $100 worth of feed fed. These figures do not reflect profit except in a comparative way; since the income per $100 worth of feed fed must cover - in addition to feed - labor, pasture, shelter and equipment. Feed fed to work animals was not included. The most successful third with $2.46 an acre more investment in livestock secured $6.63 more income an acre from livestock.

The 11 most profitable farms had about fifty cents an acre more labor cost and eighty cents an acre more machinery cost, but their better incomes from crops and livestock more than justified these extra expenses. They show a good labor efficiency as reflected in the fact that they grew more acres of

crops per man than the 11 least profitable farms.

The situation is summed up in the income and expense per acre. The 11 most successful farms had a gross income of $30.63 with expenses of $14.25 an acre, leaving a net of $16.38. The 11 least successful farms with a gross income of $17.00 and expense of $13.17 had a net income of only $3.53 an acre. The more successful farm operators gained their advantage in using about the same expense to bring in larger gross incomes. Many similar accounting studies have indicated that for a large number of farmers there are opportunities to increase yield per acre, and production per cow, per hen, or per sow, by economical methods which will add more to the income than to the expense and thus widen the margin of net income. It is especially true for most small farms that they have greater opportunities to increase the gross income than to cut expense.

The following table shows some comparative figures for the St. Clair County area for 1927 and 1928. Some records for Monroe and Randolph Counties were included for 1927. It appears that net incomes were improved in 1928 over 1927. Both the income and the expense per acre were higher, but incomes increased somewhat more than expenses. Part of this change probably is due to the fact that only St. Clair County accounts were included for 1928.

Comparative Earnings on Farms in St. Clair County for 1927 and 1928

Item	1927*	1928
Number of farms	36	32
Average size of farms, acres	172	151
Average rate earned, percent	4	6.3
Average value of land per acre	$ 72	$ 93
Average investment per acre	114	140
Investment in livestock per farm	1734	1682
Investment in cattle per farm	712	812
Investment in hogs per farm	295	232
Investment in poultry per farm	167	181
Gross income per acre	15.68	22.78
Operating cost per acre	11.15	13.98
Net increase from crops per farm	816	1307
Miscellaneous income per farm	88	43
Livestock income per farm	1787	2098
Gross income per farm	2691	3448
Cattle income per farm	271	331
Dairy sales per farm	806	927
Hog income per farm	400	395
Poultry income per farm	258	400

* Figures for 1927 include some records from Monroe and Randolph Counties.

St. Clair County - 1928

Item	Your farm	Average of 32 farms	11 most profitable farms	11 least profitable farms
Capital Investments - Total	$_____	$21 111	$18 089	$22 364
Land	_____	14 014	11 693	15 336
Farm improvements	_____	2 586	2 229	2 326
Machinery and equipment	_____	1 242	1 191	1 171
Feed, grain and supplies	_____	1 587	1 361	1 689
Livestock - Total	_____	1 682	1 615	1 842
Horses	_____	424	385	507
Cattle	_____	812	841	817
Hogs	_____	232	205	266
Sheep	_____	33	19	52
Poultry	_____	181	164	200
Bees	_____		1	
Receipts-Net Increases-Total	$_____	$3 448	$3 799	$2 907
Feed, grain and supplies	_____	1 307	1 494	899
Miscellaneous	_____	43	40	13
Livestock - Total	_____	2 098	2 265	1 995
Horses	_____			
Cattle	_____	331	451	301
Hogs	_____	395	346	394
Sheep	_____	45	28	68
Poultry	_____	152	124	178
Egg sales	_____	248	295	229
Dairy sales	_____	927	1 020	825
Bees	_____		1	
Expenses-Net Decreases-Total	$_____	$1 189	$ 968	$1 239
Farm improvements	_____	129	88	149
Machinery and equipment	_____	311	295	267
Feed, grain and supplies	_____			
Misc. livestock expense	_____	35	25	43
Miscellaneous crop expense	_____	175	141	190
Hired labor	_____	252	193	323
Taxes, insurance, etc.	_____	236	189	261
Miscellaneous expenses	_____	25	22	24
Horses - decreases	_____	26	15	32
Miscellaneous livestock decreases _____	_____			
Receipts less expenses	$_____	$2 259	$2 831	$1 618
Total unpaid labor	_____	927	800	963
Operator's labor	_____	597	600	591
Family labor	_____	330	200	372
Net income from investment and management	_____	1 332	2 031	655
Rate earned on investment	_____%	6.31%	11.23%	2.93%
Income left before paying for operator's labor	_____	1 929	2 631	1 246
5 percent of Capital Invested	_____	1 055	905	1 118
Labor and management wage	$_____	$ 874	$1 726	$ 128

St. Clair County - 1928

Factors helping to analyze the farm buiness	Your farm	Average of 32 farms	11 most profitable farms	11 least profitable farms
Size of farm - acres	_____	151	124	171
Percent of land area tillable	_____	86%	90%	79%
Acres in Corn	_____	36	29	38
Oats	_____	20	17	20
Wheat	_____	28	22	32
Crop yields - Corn, bu. per acre	_____	52	56	48
Oats, bu. per acre	_____	38	40	34
Wheat, bu. per acre	_____	8	8	10
Return per $100 of feed fed to productive livestock	_____	$172	$183	$156
Returns per $100 invested in all productive livestock	_____	152	166	136
For $100 in Cattle	_____	140	157	121
Hogs	_____	148	144	142
Poultry	_____	215	249	204
Investment in productive livestock per acre	_____	9.14	11.03	8.57
Receipts from productive livestock per acre	_____	13.87	18.30	11.67
Man labor cost per acre	_____	7.81	8.01	7.52
Crop acres per man	_____	59.	60.	55.
Crop acres per horse	_____			
(with tractor)	_____	23.	22.	20.
(without tractor)	_____	19.	19.	18.
Expenses per $100 gross income	_____	$61.	$47.	$77.
Machinery cost per acre	_____	2.06	2.38	1.56
Farm improvements cost per acre	_____	.85	-.71	-.87
Gross receipts per acre	_____	22.78	30.63	17.00
Total expenses per acre	_____	13.98	14.25	13.17
Net receipts per acre	_____	8.80	16.38	3.83
Percent of farms with tractor	_____	41%	36%	45%
Value of land per acre	_____	93.	94.	90.
Total investment per acre	_____	140.	146.	131.

Find Your Farm Leaks

St. Clair, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
										Man	Horse				
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
13.3	73	59	22	210	286	355	16.14	20.87	4.30	94	37	33	26	44	290
12.3	70	56	20	200	268	335	15.14	19.87	4.80	89	35	31	31	41	270
11.3	67	53	18	190	248	315	14.14	18.87	5.30	84	33	29	36	38	250
10.3	64	50	16	180	228	295	13.14	17.87	5.80	79	31	27	41	35	230
9.3	61	47	14	170	208	275	12.14	16.87	6.30	74	29	25	46	32	210
8.3	58	44	12	160	188	255	11.14	15.87	6.80	69	27	23	51	29	190
7.3	55	41	10	150	168	235	10.14	14.87	7.30	64	25	21	56	26	170
6.3	52	38	8	140	148	215	9.14	13.87	7.80	59	23	19	61	23	150
5.3	49	35	6	130	128	195	8.14	12.87	8.30	54	21	17	66	20	130
4.3	46	32	4	120	108	175	7.14	11.87	8.80	49	19	15	71	17	110
3.3	43	29	--	110	88	155	6.14	10.87	9.30	44	17	13	76	14	90
2.3	40	26	--	100	68	135	5.14	9.87	9.80	39	15	11	81	11	70
1.3	37	23	--	90	48	115	4.14	8.87	10.30	34	13	9	86	8	50
0.3	34	20	--	80	28	95	3.14	7.87	10.80	29	11	7	91	5	30
-0.7	31	17	--	70	--	75	2.14	6.87	11.30	24	9	5	96	2	--

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Department of Farm Organization and Management

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MONROE, RANDOLPH AND WASHINGTON COUNTY FARM BUREAUS

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ANNUAL FARM BUSINESS REPORT

on

Twenty-seven Farms

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The farm account is a guide
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Urbana, Illinois

April 1929

M-108

ANNUAL FARM BUSINESS REPORT

Monroe, Randolph and Washington Counties, Illinois, 1928

Prepared by R. R. Hudelson, F. L. Underwood, and H. C. M. Case*

The 27 farmers in the above named counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 5 percent on their investments. A wage of $50 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $182, there remains a rate of 4 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $601. If it is assumed that the labor performed by the operator is worth $50 a month or $600 a year, there is one dollar left as pay for the risk and management in operating the business.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by the representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rate earned on farms included in this farm accounting project average about 2 percent higher than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these three counties earned about 3 percent on his investment for 1928 to pay for use of capital, risk, and management.

Farm earnings vary widely from year to year, and 1928 was a better year than 1927 for these counties but earnings were low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928 show an average rate earned on their net worth of 12.1 percent. These industries pay for management in the form of salaries to managers and officers.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $58 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $91 an acre.

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*C. A. Hughes, E. C. Secor, and G. E. Smith, farm advisers in Monroe, Randolph, and Washington Counties, respectively cooperated in supervising and collecting records used in this report.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

Every farm manager can gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1,778 larger net incomes than the third which were least successful.

There was only five acres difference in size of farm between the two groups. The more profitable farms averaged 8 acres more corn, 9 acres more oats, and just the same acreage of wheat as the less profitable farms. Difference in acreage was not an important factor.

One very important advantage of the 10 most profitable farms was in higher crop yields. As an average they produced 18 bushels more corn, 4 bushels more oats, and 5 bushels more wheat per acre than the 10 least profitable farms. Figured on their acreage this gave the more profitable farms 1,384 bushels more grain per farm than the less profitable farms. Operating costs do not vary greatly with yield and the yields on the 10 least profitable farms were too low to pay operating costs including a labor wage to the farm operator.

A second very important factor favoring the more successful farm operators was their greater efficiency in handling and feeding livestock. They secured a return of $189 for each $100 worth of feed fed as compared with $138 for each $100 worth of feed fed by the less successful farm operators. Greater efficiency is also reflected in a larger return on cattle, hogs, and poultry for each $100 invested. The more profitable farms also carried more livestock which was an advantage. With $3.00 per acre more livestock investment per acre they produced $5.28 more livestock income.

More labor was used on the 10 most profitable farms and they had higher expenses for equipment, but their larger incomes much more than made up for the extra cost. They had $10.91 more income per acre with only $1.96 more expense per acre. It is important that the relation of expense to income be watched. In this case the more successful farmers had expenses amounting to $52 for each $100 of income while the less successful ones had expenses of $99 for each $100 of income.

The average business was too small on the 10 least profitable farms. Their gross incomes amounted to only $1,529 and very few farms yield a satisfactory net income with a gross income of less than $3,000. With less business than this there is nothing left after a minimum of expense is covered. Every farm business be it ever so small should maintain a set of equipment and a set of improvements and furnish employment to one man for a year. Many farms doing a very small business are

able to continue only because they do not pay a labor wage to the operator and his family. This means a low standard of living, however, and every farm business which is to be continued should be built up in size until it will give a reasonable net income. This does not necessarily mean to farm more acres. In most cases it means to so organize and operate the farm that it will produce more income per acre. This may mean that more intensive enterprises should be adopted. Among the intensive enterprises are poultry raising, dairying, fruit growing, truck farming, and seed growing. Many farms of this area have remained as wheat farms when conditions have changed so that in general extensive wheat farming is no longer profitable. Wheat is a good crop in the rotation, however, especially on farms of medium to large size.

The following table shows comparative income and investment figures for the Monroe and Randolph County district for the past five years. The figures for 1927 were affected considerably by including records from St. Clair County where land values average higher and farms tend to be smaller. The average rate earned for 1928 was close to the average for the last five years.

Comparative Earnings on Farms in the Randolph and Monroe County District

Item	1924[1]	1925[1]	1926[2]	1927[3]	1928
Number of farms	23	30	33	36	27
Average size of farms, acres	175	173	188	172	200
Average rate earned	5.0%	6.6%	6.0%	4.0%	5.0%
Average value of land per acre	$ 62	$ 54	$ 54	$ 72	$ 58
Average investment per acre	93	86	83	114	91
Investment in livestock per farm	1063	1230	1278	1734	1486
Investment in cattle per farm	384	394	425	712	635
Investment in hogs per farm	132	196	163	295	215
Investment in poultry per farm	144	148	194	167	189
Gross income per acre	15.11	15.45	13.88	15.68	13.86
Operating cost per acre	10.50	9.72	8.92	11.15	9.28
Net increase from crops per farm	1501	1354	1107	816	976
Miscellaneous income per farm	131	116	93	88	82
Livestock income per farm	1012	1196	1414	1787	1720
Gross income per farm	2644	2666	2614	2691	2778
Cattle income per farm	106	144	177	271	223
Dairy sales per farm	343	367	440	806	715
Hog income per farm	262	311	273	400	307
Poultry income per farm	299	338	475	258	445

[1] Records from Monroe and Randolph Counties only.

[2] A few records from Marion and Washington Counties included with those from Monroe and Randolph Counties.

[3] Records from Randolph, St. Clair, and Monroe Counties.

Some points of strength and some of weakness in your farm business may be found by comparing the factors of your own record in the following tables with the same factors on the average farm in each group.

Monroe, Randolph, and Washington Counties - 1928

Item	Your farm	Average of 27 farms	Ten most profitable farms	Ten least profitable farms
Capital Investments - Total	$	$18 204	$18 869	$13 999
Land		11 646	11 630	8 734
Farm improvements		2 333	2 504	2 169
Machinery and equipment		1 246	1 235	841
Feed, grain and supplies		1 493	1 722	1 111
Livestock - Total		1 486	1 778	1 144
Horses		423	461	328
Cattle		635	918	450
Hogs		215	216	128
Sheep		23	---	56
Poultry		189	183	180
Bees		1	-	2
Receipts - Net Increases - Total	$	$ 2 778	$ 3 731	$ 1 529
Feed, grain and supplies		976	1 478	327
Labor off the farm		74	31	47
Miscellaneous		8	6	11
Livestock - Total		1 720	2 216	1 144
Horses		---	---	---
Cattle		223	344	148
Hogs		307	311	104
Sheep		30	--	79
Poultry		140	170	106
Egg sales		305	326	273
Dairy sales		715	1 065	433
Bees		---	---	1
Expenses - Net Decreases - Total	$	$ 981	$ 1 095	$ 614
Farm improvements		117	105	135
Machinery and equipment		268	287	167
Feed, grain and supplies		---	---	---
Misc. livestock expense		13	14	5
Miscellaneous crop expense		162	187	109
Hired labor		196	251	35
Taxes, insurance, etc.		177	200	126
Miscellaneous expenses		23	19	20
Horses - decreases		25	31	17
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$	$ 1 797	$ 2 636	$ 915
Total unpaid labor		878	848	905
Operator's labor		592	600	591
Family labor		286	248	314
Net income from investment and management		919	1 788	10
Rate earned on investment	%	5.05%	9.48%	.07%
Income left before paying for operator's labor		1 511	2 388	600
5 percent of Capital Invested		910	943	700
Labor and management wage	$	$ 601	$ 1 445	$ - 99

Monroe, Randolph, and Washington Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 27 farms	10 most profitable farms	10 least profitable farms
Size of farm - acres		200	199	194
Percent of land area tillable		78%	81%	68%
Acres in Corn		31	32	24
Oats		21	25	16
Wheat		47	39	39
Crop yields - Corn, bu. per acre		39	45	27
Oats, bu. per acre		33	37	33
Wheat, bu. per acre		11	13	8
Return per $100 of feed fed to productive livestock		154	189	138
Returns per $100 invested in all productive livestock		153	154	138
For $100 in Cattle		138	139	128
Hogs		142	131	83
Poultry		226	260	207
Investment in productive livestock per acre		5.60	7.26	4.26
Receipts from productive livestock per acre		8.58	11.15	5.89
Man labor cost per acre		5.36	5.53	4.84
Crop acres per man		79	76	77
Crop acres per horse (with tractor)		28	26	26
(without tractor)		22	25	20
Expenses per $100 gross income		67	52	99
Machinery cost per acre		1.34	1.45	.86
Farm improvements cost per acre		.58	.53	.70
Gross receipts per acre		13.86	18.78	7.87
Total expenses per acre		9.28	9.78	7.82
Net receipts per acre		4.58	9.00	.05
Percent of farms with tractor		67%	70%	40%
Value of land per acre		58	59	45
Total investment per acre		91	95	72

Monroe, Randolph and Washington Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per			Expense per $100 income	Gross receipts per A.	Size of farm
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry				Man	Horse Tractor	Horse No tractor			
12.0	60	54	25	208	282	366	12.60	22.60	1.85	115	42	36	32	35	340
11.0	57	51	23	198	262	346	11.60	20.60	2.35	110	40	34	37	32	320
10.0	54	48	21	188	242	326	10.60	18.60	2.85	105	38	32	42	29	300
9.0	51	45	19	178	222	306	9.60	16.60	3.35	100	36	30	47	26	280
8.0	48	42	17	168	202	286	8.60	14.60	3.85	95	34	28	52	23	260
7.0	45	39	15	158	182	266	7.60	12.60	4.35	90	32	26	57	20	240
6.0	42	36	13	148	162	246	6.60	10.60	4.85	85	30	24	62	17	220
5.0	39	33	11	138	142	226	5.60	8.60	5.35	80	28	22	67	14	200
4.0	36	30	9	128	122	206	4.60	6.60	5.85	75	26	20	72	11	180
3.0	33	27	7	118	102	186	3.60	4.60	6.35	70	24	18	77	8	160
2.0	30	24	5	108	82	166	2.60	2.60	6.85	65	22	16	82	5	140
1.0	27	21	3	98	62	146	1.60	0.60	7.35	60	20	14	87	2	120
0.0	24	18	--	88	42	126	--	--	7.85	55	18	12	92	--	100
-1.0	21	15	--	78	22	106	--	--	8.35	50	16	10	97	--	80
-2.0	18	12	--	68	--	86	--	--	8.85	45	14	8	102	--	60

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ANNUAL FARM BUSINESS REPORT

on

Twenty-nine Farms

for

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Urbana, Illinois

May, 1929

M-116

ANNUAL FARM BUSINESS REPORT

Wabash, Richland, Edwards and Lawrence Counties, Illinois, 1928

Prepared by R. R. Hudelson, F. L. Underwood, and H. C. M. Case*

The 29 farmers in the above named counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 2.4 percent on their investments. A wage of $50 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow 1 percent of the investment as pay for management, in this case amounting to $203, there remains a rate of 1.4 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct 5 percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $56. If it is assumed that the labor performed by the operator is worth $50 a month or $600 a year, there is nothing left as pay for the risk and management in operating the business.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $71 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $104 an acre.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rates earned on farms included in this farm accounting project average about 2 percent higher on the total farm investment than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these counties earned about one half of 1 percent on his investment for 1928 to pay for use of capital, risk and management.

Farm earnings vary widely from year to year, and these earnings were very low as compared with other representative lines of business. Nine hundred companies representing a large number of industries for which reports are available for 1928

*H. H. Lett, C. L. Beatty, H. N. Myers, and H. C. Wheeler, farm advisers in Wabash, Richland, Edwards and Lawrence Counties, respectively, cooperated in supervising and collecting the records used in this report.

show an average rate earned on their net worth of 12.1 percent as reported by a nationally known bank. These industries pay for management in the form of salaries to managers and officers. In other industries just as in farming no records are available which represent the average of all companies. Companies reporting probably are above the average.

Every farm manager should gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful, and the third which were least successful. The term "most successful" is used in the sense that these farmers were more successful than others in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1,575 larger net incomes than the third which were least successful.

There was a difference of only 5 acres in average size between the 10 most profitable farms and the 10 least profitable farms. Difference in size was therefore not important as a factor in the difference in rate earned on the investment. Neither was there much difference in percentage of tillable land or in value of land per acre between the two groups.

Better crop yields favored the more successful farms. They produced 9 bushels more corn, 9 bushels more oats, and 1½ bushels more wheat per acre than the less successful farms. It usually costs little more to produce an acre of high-yielding crop than an acre of low-yielding crop. This extra yield therefore gives more bushels over which to spread about the same amount of cost, thus giving a lower cost per bushel. A lower cost of production has the same effect on net income as does a higher market price. The season of 1928 was very unfavorable to good crop yields in this area. Wheat was mostly winterkilled and practically a failure on all farms. A wet June followed by a very dry July and August was very unfavorable to the corn crop. Better corn yields were produced, however, on fields which had been built up in organic matter thru the use of clover or manure. Low average yields resulted in the purchase of an unusual quantity of feed on farms of this area. The season of 1928 was the first in six years when the accounts from these counties showed more outlay for feed than income from crops. It was the second year of poor crop yields in the district, but in 1927 the accounts showed more crop sales than feed purchases by an average of $323 a farm.

The biggest single advantage of the more successful farm operators was due to a greater efficiency in handling and feeding livestock. With $2.00 more livestock investment per acre they secured $7.11 more livestock income per acre. Most of this advantage was in the dairy and poultry enterprises as shown by the returns per $100 invested in each of these enterprises. The average farm in the more profitable group had an income of $953 from dairy sales and $629 from poultry products as compared with $238 and $226 respectively on the less successful farms. There seems to have been a tendency to increase the average size of the dairy and poultry enterprises on farms of this area during the past few years. The accounts indicate that this is a trend toward more profitable farming provided efficient methods are followed.

The more profitable farms had higher average costs for labor and equipment which might be expected with larger dairy and poultry enterprises. A larger

outlay for these items of cost more than paid for itself in increased incomes from livestock as well as in larger yields of crops.

The conditions are summed up in the figures showing gross income and expense per acre. The more profitable farms produced an average income of $18.14 an acre with an expense of $12.04 as compared with $6.99 income and $9.02 expense on the less profitable farms. This resulted in a net income of $6.10 an acre and a net loss of $2.03 an acre respectively for the two groups.

The following table presents an interesting comparison of income and investment figures on farms of this area during the last five years. The last two years have been the most unfavorable for farm incomes in this area since 1922 if we are to judge by the accounts available. This corresponds with records from other sections of southeastern Illinois. Most of the central and northern sections of the state enjoyed better farm incomes for 1928 than for the two preceding years.

Comparative Earnings on Farms in Wabash, Edwards, Richland, and Lawrence Counties

Item	1924[1]	1925[2]	1926[1]	1927[3]	1928
Number of farm records.	41	32	30	45	29
Average size of farm in acres . . .	174	187	172	186	196
Average rate earned, percent. . . .	7.2	6.2	5.6	2.1	2.4
Average value of land per acre. . .	$ 85	$ 83	$ 90	$ 81	$ 71
Average investment per acre	115	120	128	119	104
Investment in livestock per farm. .	1534	1737	1923	2007	1799
Investment in cattle per farm . . .	626	694	835	905	881
Investment in hogs per farm	293	418	501	517	349
Investment in poultry per farm. . .	144	175	166	162	174
Gross income per acre	18.23	17.22	19.75	13.71	13.25
Operating cost per acre	9.89	9.71	12.60	11.20	10.71
Grain income less feed purchases per farm	1327	516	708	323	--
Miscellaneous income per farm . . .	102	104	167	84	102
Livestock income per farm	1748	2610	2525	2143	2482
Gross income per farm.	3177	3230	3400	2550	2584
Cattle income per farm	206	298	251	542	527
Dairy products sold per farm. . . .	476	300	740	354	626
Hog income per farm	742	1482	1044	790	793
Poultry income per farm	290	490	460	385	436

[1] Records from Wabash, Edwards, Richland and Lawrence counties included for 1924 and 1926

[2] Records from Wabash,Edwards and Richland Counties included for 1925

[3] Records from Wabash, Edwards, Richland, Lawrence, and Crawford counties included for 1927

Wabash, Richland, Edwards, Lawrence Counties - 1928

Item	Your farm	Average of 29 farms	10 most profitable farms	10 least profitable farms
Capital Investments - Total	$_____	$30 348	$17 894	$15 514
Land		13 952	11 533	10 712
Farm improvements		2 264	2 222	1 765
Machinery and equipment		1 103	1 224	904
Feed, grain and supplies		1 230	1 313	834
Livestock - Total	_____	1 799	1 602	1 299
Horses		320	291	342
Cattle		881	706	542
Hogs		349	324	175
Sheep		73	83	85
Poultry		174	198	149
Bees		2	--	6
Receipts - Net Increases - Total	$_____	$ 2 584	$ 3 533	$ 1 329
Farm improvements		--	--	--
Feed, grain and supplies		--	739	--
Labor off the farm		98	160	105
Miscellaneous		4	6	--
Livestock - Total	_____	2 482	2 628	1 224
Horses		--	--	12
Cattle		527	350	284
Hogs		793	599	358
Sheep		92	97	85
Poultry		127	132	93
Egg sales		309	497	133
Dairy sales		626	953	238
Bees		8	--	21
Expenses - Net Decreases - Total	$_____	$ 1 186	$ 1 471	$ 825
Farm improvements		140	178	108
Machinery and equipment		328	427	235
Feed, grain and supplies		27	--	126
Misc. livestock expense		27	23	5
Miscellaneous crop expense		180	268	91
Hired labor		196	308	28
Taxes, insurance, etc.		249	228	213
Miscellaneous expenses		26	34	19
Horses - decreases		13	5	--
Miscellaneous livestock decreases		--	--	--
Receipts less expenses	$_____	$ 1 398	$ 2 062	$ 504
Total unpaid labor		902	872	889
Operator's labor		578	597	590
Family labor		324	275	299
Net income from investment and management		496	1 190	-385
Rate earned on investment	_____%	2.44%	6.65%	-2.48%
Income left before paying for operator's labor		1 074	1 787	205
5 percent of Capital Invested		1 018	895	776
Labor and management wage	$_____	$ 56	$ 892	$ -571

Wabash, Richland, Edwards, Lawrence Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 29 farms	10 most profitable farms	10 least profitable farms
Size of farm - acres		195.9	194.8	190.1
Percent of land area tillable		86.8%	89.4%	86.0%
Acres in Corn		44.3	45.4	33.6
Oats		21.0	24.1	17.4
Wheat		16.1	15.9	15.6
Crop yields - Corn, bu. per acre		26.2	25.4	16.3
Oats, bu. per acre		32.2	33.5	24.2
Wheat, bu. per acre		4.8	4.1	2.6
Return per $100 of feed fed to productive livestock		153	167	172
Returns per $100 invested in all productive livestock		164	193	128
For $100 in Cattle		127	167	96
Hogs		233	282	216
Poultry		245	291	175
Investment in productive livestock per acre		7.77	6.98	4.98
Receipts from productive livestock per acre		12.73	13.49	6.38
Man labor cost per acre		5.63	6.06	4.82
Crop acres per man		66.9	64.2	80.5
Crop acres per horse (with tractor)		31.9	34.5	34.3
(without tractor)		22.6	29.4	21.1
Expenses per $100 gross income		81.00	66.00	129.00
Machinery cost per acre		1.67	2.19	1.24
Farm improvements cost per acre		.71	.91	.57
Gross receipts per acre		13.25	18.14	6.99
Total expenses per acre		10.71	12.04	9.03
Net receipts per acre		2.54	6.10	-2.03
Farms with tractor		48.2%	60.0%	30.0%
Value of land per acre		71	59	56
Total investment per acre		104	92	82

Find Your Farm Leaks

Wabash, Richland, Edwards and Lawrence Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned	Bushels per acre of			Returns per $100 invested in			Invest. per A. in L.S.	Receipts per A. from L.S.	Man lab. cost per A.	Crop acres per Man	Crop acres per Horse		Expense per $100 income	Gross receipts per A.	Size of farm
	Corn	Oats	Wheat	Cattle	Hogs	Poultry					Tractor	No tractor			
9.4	47	53	19	197	373	385	14.77	26.73	2.15	100	46	36	45	34	340
8.4	44	50	17	187	353	365	13.77	24.73	2.65	95	44	34	50	31	320
7.4	41	47	15	177	333	345	12.77	22.73	3.15	90	42	32	55	28	300
6.4	38	44	13	167	313	325	11.77	20.73	3.65	85	40	30	60	25	280
5.4	35	41	11	157	293	305	10.77	18.73	4.15	80	38	28	65	22	260
4.4	32	38	9	147	273	285	9.77	16.73	4.65	75	36	26	70	19	240
3.4	29	35	7	137	253	265	8.77	14.73	5.15	70	34	24	75	16	220
2.4	26	32	5	127	233	245	7.77	12.73	5.65	65	32	22	80	13	200
1.4	23	29	3	117	213	225	6.77	10.73	6.15	60	30	20	85	10	180
0.4	20	26	--	107	193	205	5.77	8.73	6.65	55	28	18	90	7	160
-0.6	17	23	--	97	173	185	4.77	6.73	7.15	50	26	16	95	4	140
-1.6	14	20	--	87	153	165	3.77	4.73	7.65	45	24	14	100	1	120
-2.6	11	17	--	77	133	145	2.77	2.73	8.15	40	22	12	105	--	100
-3.6	8	14	--	67	113	125	1.77	----	8.65	35	20	10	110	--	80
-4.6	--	11	--	57	93	105	----	----	9.15	30	18	8	115	--	60

UNIVERSITY OF ILLINOIS

COLLEGE OF AGRICULTURE

Department of Farm Organization and Management

and

MARION, JEFFERSON, WHITE, SALINE, GALLATIN, AND

WILLIAMSON COUNTY FARM BUREAUS

Cooperating

ANNUAL FARM BUSINESS REPORT

on

Forty-three Farms

for

1928

The farm account is a guide
to more profitable farm management
if its facts are studied and used.

Urbana, Illinois

April 1929

M 106

ANNUAL FARM BUSINESS REPORT

Marion, Jefferson, White, Saline, Gallatin and Williamson Counties, Illinois, 1928

Prepared by R. R. Hudelson, P. E. Johnston, and H. C. M. Case*

The 43 farmers in these southern Illinois counties who kept financial records in the Illinois Farm Account Project for 1928 earned as pay for use of the capital invested and for the management and risk of operating the business, an average of 2.7 percent on their investments. A wage of $50 a month was allowed as pay for the operator's labor, no salary being deducted for management. No satisfactory method of valuing management on farms has been found, but if we allow one percent of the investment as pay for management, in this case amounting to $154, there remains a rate of 1.7 percent as pay for the risk and use of capital invested. If, instead of deducting a labor wage for the operator, we deduct five percent of the investment as pay for the risk and use of capital, we may assume that the remaining income is pay for labor and management. Following this plan it is found that the average farm operator of this group had a labor and management wage of $249. If it is assumed that the labor performed by the operator is worth $50 a month or $600 a year, there is nothing left as pay for the risk and management in operating the business.

It should be kept in mind that these figures do not represent the average farmer in this locality. The accounts on which they are based were kept by farm operators who are progressive and businesslike enough not only to keep accounts but to submit them for analysis by the representatives of the University. During each of the last four years field studies have been made of incomes on all farms in selected areas. These have shown consistently that the rate earned on farms included in this farm accounting project average about 2 percent higher on their total farm investments than on the average of all farms in the same locality. We, therefore, would estimate that the average farmer in these southern Illinois counties earned about three-fourths of one percent on his investment for 1928 to pay for use of capital, risk, and management.

To judge the meaning of a given rate earned on the investment it is necessary to know something of the valuation on which the investment is computed. The average value of the land included in this report was placed at $57 an acre. Other items including improvements, equipment, livestock, and feed made a total investment of $92 an acre.

On account of the difficulty in getting records of produce used by the farm family, these items are not included in the income figures as stated in this report. The farm products used at home have been found to range in value from $425 to $450 a year as an average for a large number of farms where they have been recorded. This item of produce may be considered as labor income for the farm operator in addition to the labor wage deducted in the accounts.

Every farm manager can gain ideas worth money to him by studying the reasons for the difference in income between those farms which are more and those which

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*The farm advisers in the above counties cooperated in supervising and collecting the records used in this report.

are less successful than the average. For this reason the tables on pages 4 and 5 show not only the figures for the individual farm and the average, but also for the one-third of the farms which were most successful and the third which were least successful. The term "most successful" does not imply prosperity in most cases, but it does indicate comparative success by a select few farm operators in holding their own financially in spite of unfavorable conditions. The organization and operation of these select farms are well worth studying, since this group averaged $1,830 larger net incomes than the third which were least successful.

There was only three acres difference in average size of farm between the most profitable and the least profitable groups. Difference in acreage farmed was therefore not an important factor. The land of the more successful operators was valued at an average of $73 an acre while the less successful operators inventoried their land at $47. This indicates that there was considerable difference in productivity of land between the two groups. This is also borne out by the difference in yields of corn and oats. The year 1928 was unfavorable for crops in this area. Winter wheat was almost a total loss due to winterkilling. A wet June followed by dry weather in July and August was a handicap to other crops, especially corn. The 14 most profitable farms produced 18 bushels more corn and nine bushels more oats per acre than the 14 least profitable farms. Counting the difference in acreage this gave the more successful farms over twice as much corn and 255 bushels more oats to feed or sell. This advantage in yield was one of the largest advantages in favor of the more profitable farms. Yields such as were produced on the 14 least profitable farms will scarcely pay operating costs, leaving nothing to apply on the investment in land. The average wheat yield failed to pay operating costs on practically all farms.

Another big advantage for the more successful farm operators was in their greater efficiency in handling and feeding livestock. They secured an income of $161 for every $100 worth of feed fed while the less successful farmers realized only $109 from each $100 worth of feed fed. This margin of $9 is not enough to pay the other livestock costs besides feed including labor, pasture, shelter, interest, etc. On the 14 most profitable farms there was a livestock investment of $7.79 and a livestock income of $11.81 an acre as compared with $5.87 and $7.88 an acre respectively on the 14 least profitable farms. The more successful farmers therefore had more livestock and handled their livestock more efficiently. They also sold an average of $961 worth of crops per farm while the less successful farmers bought more crops than they sold.

Altho the 14 most successful farm operators had more livestock and produced better crop yields than the less successful operators they used less labor and hence had a greater labor efficiency. With slightly lower expenses and with larger gross incomes the more successful farmers gained in both directions.

The average gross income on the 14 least profitable farms was only $1,470 a farm. This is entirely too small a business. The 14 most profitable farms did a gross business of $3,121 per farm. Few farms showed themselves to be successful when the gross income was less than $3,000 a year. Too little volume of business is one of the most common handicaps of farms in this region. There are two ways of doing a bigger business. One is to farm more land and the other is to so organize the business as to produce more income per acre. More income per acre may mean securing better yields but usually it means more intensive crop or livestock enterprises. Dairy cows and poultry are the most intensive of the common livestock enterprises. Corn, sweet clover and alfalfa are intensive field crops, while all fruit and truck crops are intensive. As a rule, building up the income per acre

is more profitable than increasing the acreage farmed if the acreage is to be increased by taking on low yielding land.

The situation on these farms is summed up in the figures showing income and expense per acre. The 14 most profitable farms had gross receipts of $17.90 per acre which was slightly more than twice the gross income per acre on the 14 least profitable farms. On the other hand, the latter farms had slightly more expense per acre. When a wage is included for the farm operator and other members of the family who did farm work there was an actual loss of $2.68 an acre on the 14 least profitable farms. In other words, the only way that these farms could be operated was on a basis of about half of ordinary farm wages for the farmer and his family. This will not maintain a modern standard of living.

The following table gives an interesting comparison of income and investment figures for the last four years on farms keeping accounts in this area. Some additional counties were included for 1928 and the figures are not all from the same identical farms each year but a number of the same farms are included for each of the four years. It is clear that earnings for 1928 were the lowest in four years. The loss of a wheat crop was an important cause of reduced earnings but livestock incomes were slightly lower also. It is evident that average operating cost per acre has changed very little from year to year. The shifts in income are very much greater than in expenses.

Comparative Earnings on Accounting Farms
in
Saline, Gallatin, White, Williamson, Marion, and Jefferson Counties

Item	1925	1926	1927	1928
Number of farm records	30	25	30	43
Average size of farms in acres	202	205	180	168
Average rate earned	5.7%	6.6%	4.2%	2.7%
Average value of land per acre	$ 80	$ 79	$ 74	$ 57
Average investment per acre	115	116	107	92
Investment in livestock per farm	1,578	1,883	1,499	1,512
Investment in cattle per farm	439	505	372	472
Investment in hogs per farm	333	551	468	362
Investment in poultry per farm	165	168	188	175
Gross income per acre	15.95	17.76	14.60	12.54
Operating cost per acre	9.39	10.06	10.10	10.04
Crop income less feed purchases per farm	998	1,343	516	338
Miscellaneous income per farm	106	139	198	95
Livestock income per farm	2,118	2,162	1,909	1,679
Gross income per farm	3,222	3,644	2,623	2,112
Cattle income per farm	214	227	222	271
Dairy sales per farm	394	231	531	371
Hog income per farm	1,078	1,215	732	590
Poultry income per farm	394	453	402	378

Some points of strength and some of weakness in your own farm business may be found by comparing the factors from your own account with those for the average farm as well as with the factors for the more profitable farms and the less profitable farms.

Marion, Jefferson, White, Saline, Gallatin, and Williamson Counties - 1928

Item	Your farm	Average of 43 farms	Fourteen most profitable farms	Fourteen least profitable farms
Capital Investments - Total	$	$15 410	$19 841	$13 070
Land		9 586	12 805	8 019
Farm improvements		2 274	2 779	2 037
Machinery and equipment		858	1 012	728
Feed, grain and supplies		1 180	1 555	915
Livestock - Total		1 512	1 690	1 371
Horses		405	403	419
Cattle		472	473	328
Hogs		362	454	432
Sheep		90	178	47
Poultry		175	176	144
Bees		8	6	1
Receipts - Net Increases - Total	$	$ 2 112	$ 3 121	$ 1 470
Farm improvements		---	---	---
Feed, grain and supplies		338	961	---
Labor off the farm		80	55	107
Miscellaneous		15	47	---
Livestock - Total		1 679	2 058	1 363
Horses		4	--	14
Cattle		271	327	165
Hogs		590	809	636
Sheep		61	95	44
Poultry		132	155	75
Egg sales		246	294	177
Dairy sales		371	373	250
Bees		4	5	2
Expenses - Net Decreases - Total	$	$ 875	$ 1 032	$ 962
Farm improvements		127	120	153
Machinery and equipment		223	258	218
Feed, grain and supplies		---	---	100
Misc. livestock expense		16	18	19
Miscellaneous crop expense		167	177	153
Hired labor		157	234	126
Taxes, insurance, etc.		167	191	173
Miscellaneous expenses		18	20	20
Horses - decreases		--	14	---
Miscellaneous livestock decreases _____		--	--	---
Receipts less expenses	$	$ 1 237	$ 2 089	$ 508
Total unpaid labor		815	719	968
Operator's labor		598	600	593
Family labor		217	119	375
Net income from investment and management		422	1 370	- 460
Rate earned on investment	%	2.74%	6.90%	-3.52%
Income left before paying for operator's labor		1 020	1 970	133
5 percent of Capital Invested		771	992	654
Labor and management wage	$	$ 249	$ 978	$ - 521

Marion, Jefferson, White, Saline, Gallatin and Williamson Counties - 1928

Factors helping to analyze the farm business	Your farm	Average of 43 farms	Fourteen most profitable farms	Fourteen least profitable farms
Size of farm - acres	_____	168	174	171
Percent of land area tillable	_____	85 %	90 %	77 %
Acres in Corn	_____	33	40	34
Oats	_____	16	19	16
Wheat	_____	15	16	14
Crop yields - Corn, bu. per acre	_____	32	42	24
Oats, bu. per acre	_____	34	37	28
Wheat, bu. per acre	_____	7	7	6
Return per $100 of feed fed to productive livestock	_____	142	161	109
Returns per $100 invested in all productive livestock	_____	144	152	136
For $100 in Cattle	_____	120	129	102
Hogs	_____	171	183	161
Poultry	_____	210	244	174
Investment in productive livestock per acre	_____	6.92	7.79	5.87
Receipts from productive livestock per acre	_____	9.97	11.81	7.88
Man labor cost per acre	_____	5.77	5.47	6.39
Crop acres per man	_____	69	76	61
Crop acres per horse (with tractor)	_____	27	30	24
(without tractor)	_____	21	18	22
Expenses per $100 gross income	_____	80	56	131
Machinery cost per acre	_____	1.32	1.48	1.27
Farm improvements cost per acre	_____	.75	.69	.89
Gross receipts per acre	_____	12.54	17.90	8.59
Total expenses per acre	_____	10.04	10.04	11.27
Net receipts per acre	_____	2.50	7.86	- 2.68
Percent of farms with tractor	_____	33 %	50 %	36 %
Value of land per acre	_____	57	73	47
Total investment per acre	_____	92	114	76

Marion, Jefferson, White, Saline, Gallatin and Williamson Counties, 1928

The numbers between the lines across the middle of the page are the approximate averages for your section of the state of the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate	Bushels per acre of			Returns per $100 invested in			Invest. per A.	Receipts per acre	Man lab. cost per	Crop acres per			Expense per $100	Gross receipts	Size of
earned	Corn	Oats	Wheat	Cattle	Hogs	Poultry	in L.S.	from L.S.		Man	Horse		income	per acre	farm
											Tractor	No tractor			
9.7	53	48	21	260	311	350	14	17	2.25	105	41	35	45	33	310
8.7	50	46	19	240	291	330	13	16	2.75	100	39	33	50	30	290
7.7	47	44	17	220	271	310	12	15	3.25	95	37	31	55	27	270
6.7	44	42	15	200	251	290	11	14	3.75	90	35	29	60	24	250
5.7	41	40	13	180	231	270	10	13	4.25	85	33	27	65	21	230
4.7	38	38	11	160	211	250	9	12	4.75	80	31	25	70	18	210
3.7	35	36	9	140	191	230	8	11	5.25	75	29	23	75	15	190
2.7	32	34	7	120	171	210	7	10	5.75	70	27	21	80	12	170
1.7	29	32	5	100	151	190	6	9	6.25	65	25	19	85	9	150
0.7	26	30	3	80	131	170	5	8	6.75	60	23	17	90	6	130
-0.3	23	28	-	60	111	150	4	7	7.25	55	21	15	95	3	110
-1.3	20	26	-	40	91	130	3	6	7.75	50	19	13	100	-	90
-2.3	17	24	-	20	71	110	2	5	8.25	45	17	11	105	-	70
-3.3	14	22	-	--	51	90	1	4	8.75	40	15	9	110	-	50
-4.3	11	20	-	--	31	70	-	3	9.25	35	13	7	115	-	30

UNIVERSITY OF ILLINOIS

College of Agriculture

Department of Farm Organization and Management

SUMMARY

of

ANNUAL FARM BUSINESS REPORTS

on

One Thousand Two Hundred Fifty-Eight Farms

for

1928

Urbana, Illinois

September 1929

SUMMARY OF ANNUAL FARM BUSINESS REPORTS
on
THIRTY-THREE FARMING AREAS IN ILLINOIS
for 1928

Prepared by R. R. Hudelson and H. C. M. Case

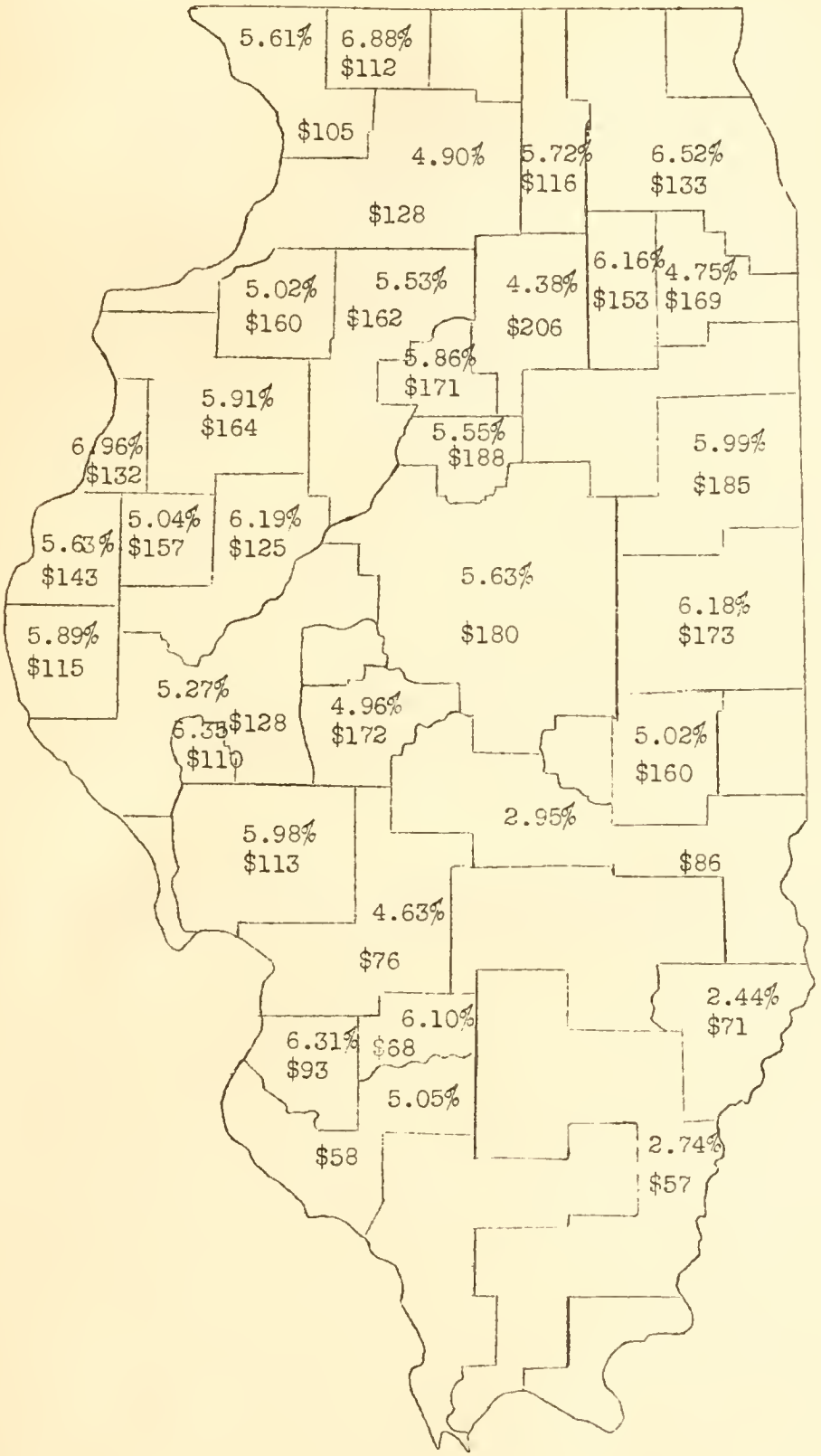
Separate farm business reports for each of the areas shown in the following tables have been prepared and distributed to each of the farm operators whose accounts were included in this summary. In these separate reports the data included herewith were discussed with a view to aiding the individual account keeper in using his accounts as a guide to more profitable farm management. The individual figures were set up in parallel columns in comparison not only with the average figures for the area but also with the average figures for the more profitable and the less profitable farms. The discussion and the figures for the comparatively successful and unsuccessful groups are not repeated here, but a limited number of copies of the separate reports are available to those who are particularly interested in a given area.

In reading the following tables it should be kept in mind that these data represent only those farms whose operators are progressive and businesslike enough to keep accounts and submit them for analysis. For four years in succession a field study has been made of the earnings of all farmers in a selected township. For three of those years it was found that the average rate earned by account keepers was about 2% higher than the average rate earned by the rank and file of farmers in the same area. For 1928 the study was made in the Chicago dairy district where practically all of the account keepers were also members of "Dairy Herd Improvement Associations". They are therefore doubly selected and the average rate earned by them was found to be about 5% higher than for the rank and file as found in the field study. With these facts in mind the reader is cautioned against using these data to represent the average Illinois farm. Only the figures in the chart on page 2 have been calculated to represent the average farm.

After three years of steadily declining earnings on Illinois farms, the year 1928 showed some improvement for the state as a whole. The improvement was such as to give the best average rate earned on the investment since 1925. In 1928 Illinois farms produced good yields of corn and oats, the corn being of better quality than for two or three years. Corn of better quality sold for better prices or where fed to livestock produced more livestock products for a given quantity of feed. The price level for oats was somewhat better in 1928 than in 1927. Hog prices continued low as in 1927 and much lower than in 1926. Cattle marketed in the first half of 1928 mostly netted a good margin of profit for Illinois farmers but those reaching the market during the latter part of the year were in many cases not so fortunate. Prices for dairy and poultry products for 1928 were about on a level with 1927 but feed was more abundant on most farms for 1928.

Not all Illinois farmers were fortunate enough to share in the improved earnings of 1928. There was severe winter killing of wheat during the winter of 1927-28 especially in southern and eastern Illinois. Farms depending on wheat for an important part of their income therefore suffered heavy losses. The most severely handicapped area of the state consisted of about thirty counties in the southern and southeastern portions of the state. This area besides losing most of its wheat acreage had a very wet June followed by dry weather in July and August resulting in a poor yield of corn. The accounts from this area clearly reflected these conditions in lower earnings while most of the remainder of the state felt some relief from the long period of reduced incomes.

Rate earned and value of land per acre by areas for which farm business reports were issued for 1928



Rate earned and value of land per acre on farms keeping accounts for 1928. Figures used are for 28 to 62 farms in each section as outlined. The average rate earned for all farms has been found to be about 2 percent less than the average for farms on which accounts are kept.

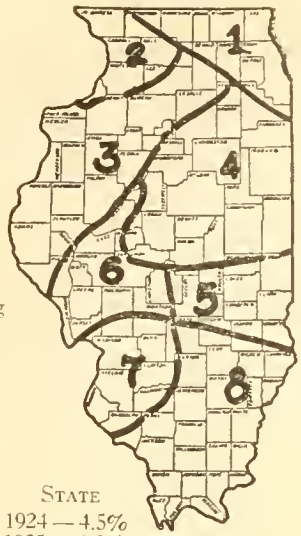
Area 1. Dairying
1924 — 4.3%
1925 — 2.8%
1926 — 2.9%
1927 — 2.7%
1928 — 3.7%

Area 2. Mixed livestock
1924 — 2.3%
1925 — 5.3%
1926 — 3.6%
1927 — 1.6%
1928 — 3.8%

Area 3. Beef and hogs
1924 — 4.3%
1925 — 4.3%
1926 — 2.3%
1927 — 1.5%
1928 — 3.7%

Area 4. Grain farming
1924 — 5.5%
1925 — 1.8%
1926 — 1.5%
1927 — 2.0%
1928 — 3.6%

Area 5. General farming (corn)
1924 — 6.3%
1925 — 2.3%
1926 — 2.3%
1927 — 1.6%
1928 — 2.0%



Area 6. General farming (wheat and corn)
1924 — 3.3%
1925 — 4.8%
1926 — 2.5%
1927 — 1.7%
1928 — 3.6%

Area 7. Wheat and dairying
1924 — 3.3%
1925 — 4.3%
1926 — 2.1%
1927 — 2.5%
1928 — 3.5%

State
1924 — 4.5%
1925 — 3.3%
1926 — 2.3%
1927 — 1.8%
1928 — 2.9%

Area 8. Mixed farming
1924 — 4.3%
1925 — 4.3%
1926 — 4.3%
1927 — 1.6%
1928 — 0.5%

COMPUTED EARNINGS FOR ALL FARMERS IN ILLINOIS AND BY FARMING-TYPE AREAS

The computations were made on the basis of careful investigations which show that the average rate earned on all farms in a given area is 1.7 to 2 percent less than on those farms enrolled in the farm-accounting project.

This page and the tables on the last four pages are reprinted from the forty-first annual report of the Illinois Agricultural Experiment Station.

TABLE 60.—SUMMARY, BY AREAS, OF BUSINESS RECORDS FROM 1,258 ILLINOIS FARMS, 1928

Accounting factors	McHenry Kane Cook DuPage	Will	Kendall Grundy	Boone DeKalb	Stephenson	Jo Daviess Carroll	Rock Island Lee Ogle Whiteside	Henry
Capital investment, total	$32 297	$43 621	$46 874	$39 574	$29 129	$33 497	$38 855	$44 637
Land	19 137	31 775	34 044	24 503	17 099	21 402	26 369	31 424
Farm improvements	5 677	5 021	5 624	6 870	5 060	5 110	5 218	4 736
Machinery and equipment	1 650	1 859	1 647	1 887	1 541	1 573	1 486	1 806
Feed, grain, and supplies	1 707	2 118	3 060	2 173	1 699	1 636	2 016	2 574
Livestock, total	4 126	2 848	2 499	4 141	3 730	3 776	3 766	4 097
Horses	391	482	631	411	419	449	548	499
Cattle	3 299	1 567	1 085	2 487	2 176	2 064	1 839	1 935
Hogs	264	613	524	929	829	1 001	1 107	1 448
Poultry	156	176	176	182	194	177	153	166
Miscellaneous livestock	16	10	83	132	112	85	119	49
Receipts, total	$ 4 958	$ 4 595	$ 5 461	$ 5 272	$ 4 329	$ 4 517	$ 4 584	$ 4 875
Feed and grain	191	1 573	2 793	487	.....	.....	131	369
Miscellaneous	63	111	62	93	52	58	61	40
Livestock, total	4 704	2 911	2 606	4 692	4 277	4 459	4 392	4 466
Cattle	783	431	480	1 371	879	990	1 066	1 302
Hogs	317	707	1 065	1 236	1 563	1 757	1 946	2 263
Poultry and eggs	293	298	422	395	358	389	306	349
Dairy sales	3 298	1 444	585	1 584	1 422	1 243	944	512
Miscellaneous livestock	13	31	54	106	55	80	130	40
Expenses, total	$ 1 762	$ 1 632	$ 1 680	$ 1 999	$ 1 359	$ 1 647	$ 1 656	$ 1 687
Farm improvements	161	208	244	320	198	202	292	195
Machinery and equipment	451	479	408	502	329	384	428	399
Feed, livestock, and dairy expense	106	43	37	87	202	337	72	56
Crop expense	206	178	199	230	158	176	190	185
Hired labor	450	400	403	457	216	276	296	460
Taxes and insurance	320	283	347	362	211	235	346	349
Miscellaneous expense	29	30	33	25	29	28	29	24
Horses, net decreases	39	11	9	16	16	9	3	18
Receipts less expenses	$ 3 196	$ 2 963	$ 3 781	$ 3 273	$ 2 970	$ 2 870	$ 2 928	$ 3 188
Total unpaid labor	1 091	889	894	1 008	966	990	1 025	945
Net farm income	$ 2 105	$ 2 074	$ 2 887	$ 2 265	$ 2 004	$ 1 880	$ 1 903	$ 2 243
Rate earned, no management pay	6.52%	4.75%	6.16%	5.72%	6.88%	5.61%	4.90%	5.02%
Rate with management paid	5.52%	3.75%	5.16%	4.72%	5.88%	4.61%	3.90%	4.02%
Labor and management wage	$1 209	$ 591	$1 253	$ 988	$1 267	$ 896	$ 643	$ 719
Size of farm, acres	144.0	187.6	222.5	210.6	152.2	205.0	205.5	197.0
Land tillable	83.3%	89.5%	89.3%	84.3%	87.3%	71.6%	83.1%	88.0%
Acres in—Corn	38.0	59.8	87.0	70.4	38.6	47.6	66.0	72.0
Oats	20.0	27.6	38.5	26.1	20.0	23.0	27.2	27.0
Wheat	5.0	26.5	18.2	4.5	1.4	2.0	6.3	6.0
Crop yields—Corn, bushels	42.2	44.9	43.8	44.3	51.6	47.7	49.8	55.0
Oats, bushels	49.1	45.6	47.1	50.3	51.9	48.4	44.1	46.0
Wheat, bushels	20.5	21.8	19.5	25.8	16.7	18.7	19.1	24.0
Livestock income on $100 of feed	$ 176	$ 139	$ 160	$ 143	$ 135	$ 142	$ 143	$ 131
Livestock income on $100 invested	124	113	131	117	125	133	121	121
For $100 in cattle	122	103	88	106	102	105	88	88
For $100 in hogs	121	127	205	137	172	181	182	159
For $100 in poultry	177	180	232	211	191	216	199	205
Investment an acre in livestock	26.31	13.76	8.97	19.04	22.54	16.39	17.71	18.84
Receipts an acre from livestock	32.68	15.52	11.71	22.28	28.10	21.75	21.39	22.71
Man labor cost an acre	$ 10.70	$ 6.87	$ 5.83	$ 6.96	$ 7.77	$ 6.18	$ 6.43	$ 7.15
Crop acres a man	50.3	88.7	104	78.9	68	69.2	80.3	77
Expense for $100 gross income	$ 58	$ 54	$ 47	$ 57	$ 54	$ 58	$ 58	$ 54
Machinery cost an acre	3.13	2.55	1.83	2.38	2.16	1.87	2.08	2.03
Improvements cost an acre	1.12	1.12	1.10	1.52	1.30	.99	1.42	.99
Gross receipts an acre	34.43	24.49	24.54	25.03	28.44	22.03	22.31	24.80
Total expense an acre	19.81	13.44	11.57	14.28	15.28	12.86	13.05	13.39
Net receipts an acre	14.62	11.05	12.97	10.75	13.16	9.17	9.26	11.41
Farms with tractor	74.1%	76.7%	61.8%	82.5%	53.1%	62.3%	46.9%	60%
Value of land an acre	$ 133	$ 169	$ 153	$ 116	$ 112	$ 105	$ 128	$ 160
Total investment an acre	224	233	211	188	191	163	189	227
Number of farms included	54	30	34	40	32	53	49	60

TABLE 60.—SUMMARY, BY AREAS, OF BUSINESS RECORDS FROM 1,258 ILLINOIS FARMS, 1928—*Continued*

Accounting factors	Bureau Stark Peoria	Knox Warren Mercer	Henderson	Hancock	McDonough	Adams	Fulton Schuyler	LaSalle
Capital investment, total	$43 923	$48 223	$44 564	$42 914	$42 948	$30 035	$39 809	$60 511
Land	31 815	34 134	32 890	31 944	32 180	21 116	29 727	46 013
Farm improvements	4 909	5 261	4 176	4 524	3 964	3 605	3 939	5 795
Machinery and equipment	1 613	1 904	1 437	1 490	1 509	1 359	1 375	2 049
Feed, grain, and supplies	2 088	2 971	2 343	1 698	2 348	1 297	1 690	3 574
Livestock, total	3 498	3 953	3 718	3 258	2 947	2 658	3 018	3 080
Horses	554	615	629	536	521	436	534	664
Cattle	1 418	1 496	1 693	1 342	889	1 206	1 098	1 401
Hogs	1 248	1 587	1 189	1 080	1 318	767	1 121	735
Poultry	128	164	128	144	183	148	124	133
Miscellaneous livestock	150	91	79	156	36	101	141	147
Receipts, total	$ 4 976	$ 5 846	$ 5 825	$ 4 974	$ 4 931	$ 4 153	$ 5 024	$ 5 832
Feed and grain	1 026	723	921	1 440	808	277	1 094	2 638
Miscellaneous	136	70	50	49	81	104	50	61
Livestock, total	3 814	5 053	4 854	3 485	4 042	3 772	3 880	3 133
Cattle	777	1 149	1 685	697	523	790	934	761
Hogs	1 985	2 894	2 537	2 009	2 702	1 869	2 251	1 122
Poultry and eggs	288	316	220	87	434	323	111	104
Dairy sales	686	574	313	635	353	653	484	1 007
Miscellaneous livestock	78	120	99	57	30	137	100	139
Expenses, total	$ 1 672	$ 2 107	$ 1 798	$ 1 702	$ 1 840	$ 1 471	$ 1 691	$ 2 220
Farm improvements	227	245	173	223	218	227	212	362
Machinery and equipment	352	574	427	422	439	318	404	640
Feed, livestock, and dairy expense	63	97	55	46	60	54	49	62
Crop expense	206	218	181	241	257	243	214	188
Hired labor	453	532	511	431	493	349	429	510
Taxes and insurance	336	382	417	313	330	253	353	419
Miscellaneous expense	22	27	34	26	26	27	25	31
Horses, net decreases	13	31	.....	.....	15	.....	5	8
Receipts less expenses	$ 3 304	$ 3 739	$ 4 027	$ 3 272	$ 3 091	$ 2 682	$ 3 333	$ 3 612
Total unpaid labor	873	891	927	854	925	914	870	961
Net farm income	$ 2 431	$ 2 848	$ 3 100	$ 2 418	$ 2 166	$ 1 768	$ 2 463	$ 2 651
Rate earned, no management pay	5.53%	5.91%	6.96%	5.63%	5.04%	5.89%	6.19%	4.38%
Rate with management paid	4.53%	4.91%	5.96%	4.63%	4.04%	4.89%	5.19%	3.38%
Labor and management wage	$924	$1 151	$1 592	$965	$739	$970	$1 172	$354
Size of farm, acres	196	208	249.6	223.0	205.0	184.3	238.2	222.9
Land tillable	83%	85%	79.1%	83%	85.9%	84.2%	70.6%	92%
Acres in—Corn	70	80	81.5	73	76.2	47.9	67.6	88.9
Oats	27	22	30.9	31	23.5	25	22.9	36.4
Wheat	6	9	14.5	18	26.2	11.5	27.2	19.6
Crop yields—Corn, bushels	53	56	51.4	48.1	50.4	42.3	47.9	47.6
Oats, bushels	46	48	48.2	50.2	51.1	40.1	44.4	46.9
Wheat, bushels	19	22	19.7	18.4	27.2	19.9	24.1	18.8
Livestock income on $100 of feed	$132	$ 135	$ 139	$133	$117	$153	$ 140	$135
Livestock income on $100 invested	121	137	142	132	157	168	145	122
For $100 in cattle	94	97	100	85	89	120	99	101
For $100 in hogs	154	180	212	205	198	244	202	168
For $100 in poultry	215	195	174	174	235	224	187	219
Investment an acre in livestock	16.05	17.76	13.61	11.82	12.55	12.05	11.22	11.55
Receipts an acre from livestock	19.46	24.25	19.37	15.62	19.72	20.28	16.29	14.06
Man labor cost an acre	$ 6.76	$ 6.84	$ 5.76	$ 5.76	$ 6.92	$ 6.85	$ 5.45	$ 6.60
Crop acres a man	78.2	87	86	90.7	81.2	71	84.7	93.8
Expense for $100 gross income	$ 51	$ 51	$ 47	$ 51	$ 56	$ 57	$ 51	$ 55
Machinery cost an acre	1.80	2.76	1.71	1.89	2.14	1.73	1.70	2.87
Improvements cost an acre	1.16	1.18	.69	1.00	1.06	1.23	.89	1.62
Gross receipts an acre	25.38	28.10	23.34	22.30	24.05	22.53	21.09	26.16
Total expense an acre	12.98	14.41	10.92	11.46	13.48	12.94	10.75	14.27
Net receipts an acre	12.40	13.69	12.42	10.84	10.57	9.59	10.34	11.89
Farms with tractor	72%	73%	60%	75.8%	67.7%	57.1%	61%	70%
Value of land an acre	$162	$ 164	$ 132	$143	$157	$115	$ 125	$206
Total investment an acre	224	232	179	192	210	163	167	271
Number of farms included	43	30	30	33	31	28	41	30

TABLE 60.—SUMMARY, BY AREAS, OF BUSINESS RECORDS FROM 1,258 ILLINOIS FARMS, 1928—*Continued*

Accounting factors	Marshall Putnam	Woodford	Macon McLean Logan Piatt DeWitt Tazewell	Ford Iroquois	Champaign Vermilion	Douglas Coles	Clark Crawford Christian Shelby Cumberland	Sangamon
Capital investment, total	$53 214	$44 779	$55 157	$59 741	$46 819	$47 828	$25 848	$60 237
Land	39 675	35 046	43 848	47 847	37 238	37 352	17 692	48 117
Farm improvements	4 678	3 199	3 969	4 926	3 275	4 138	3 513	4 596
Machinery and equipment	1 981	1 421	1 702	1 571	1 471	1 613	1 245	1 654
Feed, grain, and supplies	3 109	2 709	2 858	2 871	2 576	2 080	1 281	2 461
Livestock, total	3 771	2 404	2 780	2 526	2 259	2 645	2 117	3 409
Horses	621	592	718	690	684	535	365	674
Cattle	1 462	948	1 083	1 057	917	955	857	1 395
Hogs	1 527	667	763	522	472	760	623	1 051
Poultry	124	150	147	191	151	112	167	113
Miscellaneous livestock	37	47	69	66	35	283	105	176
Receipts, total	$ 6 030	$ 4 822	$ 6 248	$ 6 519	$ 5 582	$ 5 212	$ 3 001	$ 6 334
Feed and grain	980	2 212	3 383	3 929	3 242	2 727	307	2 091
Miscellaneous	102	46	74	72	109	68	72	107
Livestock, total	4 948	2 564	2 791	2 518	2 231	2 417	2 622	4 136
Cattle	1 287	413	724	401	503	602	661	1 279
Hogs	3 039	1 350	1 134	1 035	877	1 217	1 132	2 098
Poultry and eggs	244	301	290	365	301	265	367	210
Dairy sales	310	458	593	656	518	242	390	431
Miscellaneous livestock	68	42	50	61	32	91	72	118
Expenses, total	$ 1 968	$ 1 440	$ 2 160	$ 1 993	$ 1 789	$ 1 961	$ 1 407	$ 2 447
Farm improvements	204	163	200	263	177	208	174	203
Farm machinery	533	335	511	466	410	379	364	510
Feed, livestock, and dairy expense	70	32	48	41	43	39	46	68
Crop expense	201	174	304	246	230	310	189	317
Hired labor	464	302	524	495	451	571	326	777
Taxes and insurance	459	411	520	457	419	432	272	519
Miscellaneous expense	27	23	33	24	31	22	20	32
Horses, net decreases	10	.....	20	1	28	.....	16	21
Receipts less expenses	$ 4 062	$ 3 382	$ 4 088	$ 4 526	$ 3 793	$ 3 251	$ 1 594	$ 3 887
Total unpaid labor	946	897	982	949	901	848	831	901
Net farm income	$ 3 116	$ 2 485	$ 3 106	$ 3 577	$ 2 892	$ 2 403	$ 763	$ 2 986
Rate earned, no management pay	5.86%	5.55%	5.63%	5.99%	6.18%	5.02%	2.95%	4.96%
Rate with management paid	4.86%	4.55%	4.63%	4.99%	5.18%	4.02%	1.95%	3.96%
Labor and management wage	$1 175	$943	$1 046	$1 282	$1 270	$680	$ 78	$676
Size of farm, acres	231.7	186.8	243.6	259	215	233.4	206.4	279.9
Land tillable	84.5%	87%	92.9%	94%	92%	90.8%	83.6%	88.9%
Acres in—Corn	82.3	74.9	108	111	90	91.3	63.3	107.8
Oats	27.2	40.2	45.8	61	45	43.4	26.4	41
Wheat	26	5.7	13.1	14	4	8.8	5.7	24.5
Crop yields—Corn, bushels	53.1	55.1	46.9	46	48	48.5	32	47.2
Oats, bushels	48.7	40.7	44	37	41	46.9	41.5	47.4
Wheat, bushels	21.5	17.8	18	17	14	12.1	5.4	17.8
Livestock income on $100 of feed	$ 118	$123	$ 144	$ 134	$ 184	$107	$134	$128
Livestock income on $100 invested	150	142	133	135	141	124	142	140
For $100 in cattle	100	93	112	96	110	94	105	108
For $100 in hogs	199	206	158	200	189	161	197	192
For $100 in poultry	183	198	190	194	193	224	221	177
Investment an acre in livestock	14.20	9.61	8.64	7.22	7.37	8.36	8.94	10.56
Receipts an acre from livestock	21.35	13.68	11.46	9.72	10.38	10.34	12.70	14.78
Man labor cost an acre	$ 6.08	$ 6.42	$ 6.18	$ 5.58	$ 6.29	$ 6.08	$ 5.60	$ 6.00
Crop acres a man	91.6	89.1	101.6	115.2	100.5	98.4	75.6	97.8
Expense for $100 gross income	$ 48	$ 48	$ 50	$ 45	$ 48	$ 54	$ 78	$ 53
Machinery cost an acre	2.30	1.80	2.10	1.80	1.91	1.62	1.76	1.82
Improvements cost an acre	.88	.87	.82	1.02	.82	.89	.84	.73
Gross receipts an acre	26.02	25.79	25.65	25.17	25.96	22.33	14.54	22.62
Total expense an acre	12.57	12.50	12.90	11.36	12.51	12.03	10.84	11.96
Net receipts an acre	13.45	13.29	12.75	13.81	13.45	10.30	3.70	10.66
Farms with tractor	73.3%	64.4%	77.4%	74%	71%	80%	61.7%	57.9%
Value of land an acre	$ 171	$188	$ 180	$ 185	$ 173	$160	$ 86	$ 172
Total investment an acre	230	239	226	231	218	205	125	215
Number of farms included	30	45	53	34	36	30	47	38

TABLE 60.—SUMMARY, BY AREAS, OF BUSINESS RECORDS FROM 1,258 ILLINOIS FARMS, 1928—*Concluded*

Accounting factors	Mason Morgan Cass Pike Brown	Scott	Jersey Greene Macoupin	Madison Bond Montgomery	Clinton	St. Clair	Monroe Randolph Washington	Wabash Richland Edwards Lawrence	Marion Jefferson White Saline Gallatin Williamson
Capital investment, total	$41 832	$32 854	$33 355	$21 566	$18 193	$21 111	$18 204	$20 348	$15 410
Land	30 626	24 535	23 045	14 003	11 007	14 014	11 646	13 952	9 586
Farm improvements	4 298	3 220	3 735	3 105	2 484	2 586	2 333	2 264	2 274
Machinery and equipment	1 529	1 328	1 617	1 256	1 296	1 242	1 246	1 103	858
Feed, grain, and supplies	2 456	1 524	2 180	1 391	1 411	1 587	1 493	1 230	1 180
Livestock, total	2 923	2 247	2 778	1 811	1 995	1 682	1 486	1 799	1 512
Horses	581	530	453	339	457	424	423	320	405
Cattle	1 214	735	1 465	844	1 014	812	635	881	472
Hogs	963	798	648	328	191	232	215	349	362
Poultry	124	128	144	176	304	181	189	174	175
Miscellaneous livestock	41	56	68	124	29	33	24	75	98
Receipts, total	$ 4 923	$ 4 421	$ 4 746	$ 3 080	$ 3 067	$ 3 448	$ 2 778	$ 2 584	$ 2 112
Feed and grain	1 184	1 668	1 014	540	204	1 307	976	.....	338
Miscellaneous	74	75	99	101	113	43	82	102	95
Livestock, total	3 665	2 678	3 633	2 439	2 750	2 098	1 720	2 482	1 679
Cattle	1 038	535	772	452	406	331	223	527	271
Hogs	2 117	1 646	1 549	772	314	395	307	793	590
Poultry and eggs	239	120	320	328	608	400	445	436	378
Dairy sales	222	316	906	806	1 408	927	715	626	371
Miscellaneous livestock	49	61	86	81	14	45	30	100	69
Expenses, total	$ 1 872	$ 1 522	$ 1 898	$ 1 232	$ 951	$ 1 189	$ 981	$ 1 186	$ 875
Farm improvements	265	145	214	189	181	129	117	140	127
Machinery and equipment	388	268	413	333	239	311	268	328	223
Feed, livestock, and dairy expense	62	38	56	25	24	35	13	54	16
Crop expense	219	189	199	200	208	175	162	180	167
Hired labor	505	434	646	252	125	252	196	196	157
Taxes and insurance	400	406	317	197	141	236	177	249	167
Miscellaneous expense	26	26	26	29	21	25	23	26	18
Horses, net decreases	7	16	27	7	12	26	25	13	.....
Receipts less expenses	$ 3 051	$ 2 899	$ 2 848	$ 1 848	$ 2 116	$ 2 259	$ 1 797	$ 1 398	$ 1 237
Total unpaid labor	848	815	853	848	1 014	927	878	902	815
Net farm income	$ 2 203	$ 2 084	$ 1 995	$ 1 000	$ 1 102	$ 1 332	$ 919	$ 496	$ 422
Rate earned, no management pay	5.27%	6.34%	5.98%	4.63%	6.10%	6.31%	5.05%	2.44%	2.74%
Rate with management paid	4.27%	5.34%	4.98%	3.63%	5.10%	5.31%	4.05%	1.44%	1.74%
Labor and management wage	$792	$1 137	$877	$508	$786	$874	$601	$ 56	$249
Size of farm, acres	240.2	222	204	184	161	151	200	195.9	168
Land tillable	80.6%	81%	85.9%	83.4%	89%	86%	78%	86.8%	85%
Acres in—Corn	76.9	70	71	45	40	36	31	44.3	33
Oats	27.7	18	21	27	35	20	21	21	16
Wheat	34.4	43	18	15	16	28	47	16.1	15
Crop yields—Corn, bushels	47.9	49	46.4	40.2	35	52	39	26.2	32
Oats, bushels	37.8	40	36.2	33.8	40	38	33	32.2	34
Wheat, bushels	17.2	16	15.5	6.8	4	8	11	4.8	7
Livestock income on $100 of feed	$131	$ 134	$147	$156	$164	$172	$154	$153	$142
Livestock income on $100 invested	144	147	148	150	171	152	153	164	144
For $100 in cattle	93	92	107	130	165	140	138	127	120
For $100 in hogs	208	188	244	213	169	148	142	233	171
For $100 in poultry	193	208	225	181	201	215	226	245	210
Investment an acre in livestock	10.59	8.19	12.06	8.82	10.00	9.14	5.60	7.77	6.92
Receipts an acre from livestock	15.26	12.06	17.80	13.20	17.06	13.87	8.58	12.73	9.97
Man labor cost an acre	$ 5.63	$ 5.63	$ 7.35	$ 5.98	$ 7.07	$ 7.81	$ 5.36	$ 5.63	$ 5.77
Crop acres a man	90.3	76	62.2	70	67	59	79	66.9	69
Expense for $100 gross income	$ 55	$ 53	$ 58	$ 68	$ 64	$ 61	$ 67	$ 81	$ 80
Machinery cost an acre	1.62	1.21	2.02	1.81	1.48	2.06	1.34	1.67	1.32
Improvements cost an acre	1.10	.65	1.05	1.03	1.12	.85	.58	.71	.75
Gross receipts an acre	20.49	19.91	23.26	16.74	19.03	22.78	13.86	13.25	12.54
Total expense an acre	11.32	10.52	13.48	11.30	12.19	13.98	9.28	10.71	10.04
Net receipts an acre	9.17	9.39	9.78	5.44	6.84	8.80	4.58	2.54	2.50
Farms with tractor	64.5%	67%	45%	52%	30%	41%	67%	48.2%	33%
Value of land an acre	$128	$ 110	$113	$ 76	$ 68	$ 93	$ 58	$ 71	$ 57
Total investment an acre	174	148	164	117	113	140	91	104	92
Number of farms included	62	30	38	33	33	32	27	29	43

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Area 1. Dairying
1924 — 4.3%
1925 — 2.8%
1926 — 2.9%
1927 — 2.7%

Area 3. Beef and hogs
1924 — 4.3%
1925 — 4.3%
1926 — 2.3%
1927 — 1.5%

Area 5. General farming (corn)
1924 — 6.3%
1925 — 2.3%
1926 — 2.3%
1927 — 1.6%

Area 7. Wheat and dairying
1924 — 3.3%
1925 — 4.3%
1926 — 2.1%
1927 — 2.5%

State
1924 — 4.5%
1925 — 3.3%
1926 — 2.3%
1927 — 1.8%

Area 2. Mixed livestock
1924 — 2.3%
1925 — 5.3%
1926 — 3.6%
1927 — 1.6%

Area 4. Grain farming
1924 — 5.5%
1925 — 1.8%
1926 — 1.5%
1927 — 2.0%

Area 6. General farming (wheat and corn)
1924 — 3.3%
1925 — 4.8%
1926 — 2.5%
1927 — 1.7%

Area 8. Mixed farming
1924 — 4.3%
1925 — 4.3%
1926 — 4.3%
1927 — 1.6%

Computed Earnings for All Farmers in Illinois and by Farming-Type Areas

The computations were made on the basis of careful investigations which show that the average rate earned on all farms in a given area is 1.7 to 2 percent less than on those farms enrolled in the farm-accounting project.